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Low Income (Poverty) Dynamics in Canada: Entry, Exit, Spell Durations, and Total Time

W-00-7E

by
Ross Finnie
June 2000

Working
Paper

Canada

Applied Research Branch
Strategic Policy
Human Resources Development Canada

Direction générale de la recherche appliquée
Politique stratégique
Développement des ressources humaines Canada

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Printed/Imprimé 2000
ISBN: 0-662-29364-9
Cat. No./N° de cat. MP32-28/00-7E

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Abstract

Understanding poverty has suffered in the past from a lack of information about the dynamics of low income — how many people enter and leave low income each year, how long people stay poor, what circumstances accompany entry into and exit out of low income — the characteristics of the long-term poor. As a result, policy has suffered, most essentially because people for whom low income is a temporary setback need different support from those for whom poverty is a long-term condition.

This study, the first general analysis of its type, explores the dynamics of poverty in Canada over the 1992–96 period using the recently developed Longitudinal Administrative Databank (LAD). Among the observations this database makes possible are the relationships between changes in family status and income: becoming a single parent and leaving home as a young adult are, for example, strongly associated with entry into low income, while becoming attached is strongly associated with leaving low income for both unattached individuals and single parents (especially women). Other interesting observations are the increasingly greater likelihood of remaining poor as time in poverty increases, and the greater success in staying out of low income as time since a previous low-income spell increases.

Among the most striking findings is that the population in low income consists of two quite different groups. For half of those in low income at any time during the period studied, this was a temporary experience. By contrast, the other half were in poverty on a long-term basis (more than half the time) and some 40 percent were in poverty throughout the entire period. This latter group, which represents 6 percent of the total population studied, presents special policy challenges, but if measures such as training and other forms of assistance in entering the labor market could be made to work, it also offers the greatest opportunity to reduce poverty rates on a permanent basis.

The findings also reveal that personal characteristics and past low-income experience could help policymakers identify the population at risk of chronic low-income status and thereby effectively target policy measures. To this end, a mixture of interventions — both "carrots" and "sticks" (but in a "kinder, gentler" form than found in recent US reforms) and a strong labour market — are needed to reduce poverty in Canada, thus serving both equity and efficiency goals to which individuals across the political spectrum might agree.

Résumé

Il était difficile de comprendre les mécanismes de la pauvreté autrefois en raison du manque d'information sur la dynamique du faible revenu — le nombre de personnes qui se retrouve chaque année dans cette catégorie et le nombre qui en sort, le temps que cet état de pauvreté dure, les circonstances qui dictent leur appartenance à cette catégorie et leur départ de celle-ci — qui sont les caractéristiques des personnes qui vivent longtemps dans la pauvreté. En conséquence, la politique a souffert, essentiellement parce que les personnes qui traversent une période de pauvreté temporaire ont besoin d'une aide différente de celles qui vivent longtemps dans la pauvreté.

La présente étude, qui est la première analyse générale de ce genre, explore la dynamique de la pauvreté au Canada de 1992 à 1996 en s'appuyant sur la banque de données administratives longitudinales (BDAL) récemment élaborée. Parmi les observations que cette banque de données permet de faire, mentionnons les relations entre les changements d'état civil et de revenu : les personnes qui deviennent chef de famille monoparentale et les jeunes adultes qui quittent le domicile familial ont, par exemple, de grandes chances de devenir pauvres, tandis que les célibataires et les parents seuls (surtout les femmes) ont de meilleures chances de cesser d'être pauvres lorsqu'ils commencent à vivre en couple. D'autres observations intéressantes portent qu'il est plus probable de demeurer pauvre à mesure que la durée de la pauvreté augmente et que les chances de rester hors de la pauvreté augmentent avec l'accroissement de la durée depuis la dernière période de pauvreté.

Parmi les constatations les plus frappantes, figure celle que les pauvres forment en fait deux groupes relativement différents. Pour la moitié des pauvres à un moment ou à un autre au cours de la période visée par l'étude, cet état était provisoire. En revanche, l'autre moitié se trouvait dans cette situation à long terme (plus de la moitié du temps) et environ 40 % de ces personnes étaient pauvres pendant toute la période. Ce dernier groupe, qui représente 6 % de la population totale étudiée, présente des défis spéciaux en matière de politique, mais, si des mesures comme la formation ou d'autres formes d'aide à l'intégration du marché du travail pouvaient être mises en application, il pourrait également présenter les plus grandes possibilités de réduire les taux de pauvreté de manière permanente.

Les constatations révèlent que les caractéristiques personnelles et les périodes antérieures de pauvreté pourraient, en outre, aider les décideurs à identifier les groupes de population risquant de souffrir de pauvreté chronique et, ainsi, de cibler efficacement les mesures gouvernementales. À cette fin, une combinaison d'interventions – à la fois la technique « du bâton et de la carotte » (mais sous une forme « plus humaine et plus douce » que ne le préconisent les réformes récentes apportées aux États-Unis) et un marché du travail dynamique – est nécessaire pour réduire la pauvreté au Canada, favorisant ainsi des objectifs d'équité et d'efficacité que les personnes de tout l'éventail politique pourraient sanctionner.

Acknowledgements

The Small Area and Administrative Data Division of Statistics Canada provided access to, and support of, the Longitudinal Administrative Databank (LAD) data upon which the study is based. The author also gratefully acknowledges a Social Sciences and Humanities Research Council Research Grant which was critical in earlier stages of research with the LAD data. Helpful feedback was received from Michael Hatfield and Allen Zeesman throughout the project. Extremely useful written comments on the complete text were received from Sheldon Danziger, Martin Dooley, and Bill Robson, while Lars Osberg provided other helpful suggestions at the Canadian Employment Research Forum conference in Vancouver in June 2000, and John Richards offered suggestions regarding the policy implications of the analysis. Roger Sceviour provided truly excellent research assistance.

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1. Introduction

Poverty remains one of the most important items on the nation's social policy agenda, representing a hugely important issue in both purely economic terms (the nation's productivity, government spending, *etc.*) as well as on the human scale (*i.e.*, the associated deprivation). The first step in dealing with the issue is, though, understanding its nature, including its most basic statistical aspects. But while we know much about poverty rates and the characteristics of the poor at any given point in time, our understanding of the *dynamics* of the low income – or "poverty" (the terms are used interchangeably in this paper) – experience in Canada remains very limited.[1]

This is a serious shortcoming, as many of the most important aspects of poverty relate to its dynamic element. For example, to begin to fully understand the nature of the hardship associated with the poverty experience requires knowing whether it is typically a relatively brief or longer-term experience; to disentangle the proximate causes of entry into or exit from poverty we need to observe those events; to place specific poverty spells in a broader context relies on observing the actual income changes which occur at entry and exit, the rate at which individuals move back into poverty after escaping, and so on. Looking at poverty in a static framework tells us nothing of these.

The missing dynamic element is particularly problematic in a policy context. For example, a widespread incidence of shorter poverty spells would generally imply fundamentally different policy prescriptions than would a greater concentration of longer-term spells amongst a smaller number of individuals – the former generally presumed to tilt policy choices towards relatively short-term income support programmes to help individuals get over a hump which they would likely soon manage on their own in any event, the latter typically shifting the emphasis towards more active measures focused on a core group of individuals who need help getting back on their feet, moving into the labour market, and finding a path towards greater economic independence. More generally, any understanding of the characteristics and events associated with movements into and out of poverty could aid the development of specific policy measures aimed at reducing the former and speeding the latter. Many other examples could easily be furnished.

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[1] Recent cross-sectional studies of family incomes in general, as well as those which focus on poverty *per se*, include Beach and Slotsve [1996], Blackburn and Bloom [1994], Dooley [1994], Hatfield [1996], Love and Poulin [1991], McWatters and Beach [1990], Sharif and Phipps [1994], and Zyblock [1996a, 1996b]. Regarding the few dynamic analyses to date, Economic Council of Canada [1992] reports some findings of a descriptive nature based on an earlier version of the Longitudinal Administrative Databank (LAD) database used here; Finnie [1993, 1994, 1995] uses the same earlier LAD data to focus on the income changes which occur at divorce; Picot *et al* [1999] use the first two years of SLID data to look at low income dynamics of children over that limited time frame; Finnie [1997c] uses the current LAD (although a slightly less up-to-date version) to look at the market income dynamics (and market poverty) of fixed families with children; and Laroche [1997] uses the LAD to study market poverty dynamics while taking changes in family status into account but without adjusting the data for the sorts of spurious changes in family status observed in the raw data described below.

Until recently, the sort of longitudinal data which follows individuals over time which is required for the study of income dynamics in general, and poverty dynamics in particular, has not existed in Canada – with the country increasingly standing out on an international level in this regard.[2] Fortunately, the recently developed Longitudinal Administrative Databank (LAD), which comprises a large, representative sample of tax filers which follows individuals over time and provides information on income, taxes, and various socio-demographic characteristics, provides a new opportunity for studying poverty dynamics in this country.

The contribution of this paper is, therefore, to report the results of the first general empirical analysis of low income dynamics in Canada. The paper, covering the period 1992-96, focuses on the following items:

- the establishment of some initial "cross-sectional" (static) poverty rate benchmarks;
- annual rates of entry into and exit from poverty by sex, age, and family type;
- empirical "hazard rates" and associated "survival rates" associated with exiting and re-entering poverty;
- total time spent in low income;
- the income changes which occur when individuals enter or exit poverty;
- the specific factors associated with movements into and out of poverty;

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[2] Atkinson *et al* [1992] and OECD [1998], for example, provide comparative studies of earnings and income dynamics from which Canada was excluded. The LAD was, in contrast, the source of Canada's inclusion in Antolin, Dang, and Oxley [1999], a project in which the author participated.

- how the rates of entry, exit or re-entry change over the course of a given spell of poverty or after the exit from a previous spell;
- the effects of past poverty spells on the probability of being poor or entering low income in a later year.

The analysis is generally broken down by sex, age group, and family status, with the patterns of poverty dynamics varying to a great degree – sometimes enormously – along these dimensions (*e.g.*, the experiences of lone mothers versus others). The methodological approaches employed range from simple tabulations and counts to the estimation of various econometric models which specify entry, exit and re-entry as a function of not only the critical family status and duration effects, but also other personal attributes and situational characteristics, such as province, language, and area size of residence.

In the final section, the paper addresses various related policy issues, including how various sorts of initiatives might be targeted on different types/groups of individuals depending on the dynamic nature of their poverty experiences. At the most basic level, it is also pointed out that while any policy measures targeted on the small core of the population which is chronically poor would presumably be challenging, they could also be extremely rewarding if even modest successes were realized, since a quite substantial share of the poor population at any given time is made up of this hard core group: that is, delivering something like 6 percent of the population from poverty on a more-or-less permanent basis would cut poverty rates in any given year by around 40 percent – a tantalising proposition from a policy perspective regardless of at which point on the political spectrum a reader (or policy maker or politician) might reside. Some suggestions for future research are also offered.

2. The Data and Definition of Terms

The Longitudinal Administrative Databank (LAD) is a ten percent representative sample of Canadian tax filers followed as individuals over time and matched into family units on an annual basis, thus providing individual and family-level information on incomes, taxes, and basic demographic characteristics in a dynamic framework. The first year of data is 1982 and the file ran through 1996 at the time this project was undertaken. Only the 1992-96 period is used, however, since social assistance ("welfare") income is not as fully or accurately represented on the file in the earlier years.[3] (See the box for further details on the general attributes of the LAD.)

The LAD Database

The LAD is constructed from Revenue Canada tax files, with individuals selected into the database according to a random number generator based on Social Insurance Numbers and followed over time by the same identifier. The LAD's coverage of the adult population is very good since, unlike some other countries (such as the U.S.) the rate of tax filing in Canada is very high: higher income Canadians are required to do so, while lower income individuals have strong incentives to file in order to recover income tax and other payroll tax deductions made throughout the year and to receive various tax credits. The LAD thus comprises a dynamic, largely representative sample of the adult Canadian population.

The representativeness of the LAD is especially significant in the context of an analysis of low income dynamics, since survey based databases – both cross-sectional and longitudinal – often tend to have problems in locating (and following) low income individuals in particular, meaning that the LAD has favourably low sample selection and attrition biases relative to other databases.

The large number of observations on the LAD (around two million observations in any given year) provides for a robust and detailed analysis: for example, in this study, outcomes are generally broken down separately for individuals of four different family types and for men and women separately, even as some very specific aspects of the low-income experience are investigated – something which would not typically be possible with survey-based databases.

Finally, the income information (based on individuals' tax declarations) is excellent and – even allowing for false reporting – probably superior to what is typically available with survey data where respondents provide the income information themselves.

In summary, its representative nature, dynamic structure, and the detailed income information it provides make the LAD well suited to the study of income dynamics generally, and low income dynamics in particular. ▪

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[3] Social assistance has been a separate item on individuals' general T-1 tax return form and has entered various calculations (and has thus been verified by Revenue Canada) through the corresponding "T-5 SA" forms sent out to individuals only since 1992. The social assistance data on the LAD would appear to cover 80-90 percent of all such payments, thus comparing favourably with other Canadian survey databases in this regard.

2.1 The Unit of Analysis, the Income Measure, and the Low Income Threshold

This study focuses on the low income dynamics of individuals, although income is viewed in a family context, based on the usual assumption that families pool and share their incomes and that there are certain economies of scale for people living together.

Incomes are defined quite inclusively, including earnings, self-employment income, returns to investments, and all other private sources (except capital gains), as well as government transfers and tax credits. The appropriate deductions are then made (CPP and UI/EI payments, child and spousal support payments), after which post-tax (disposable) income is arrived at by subtracting tax payable.

Total disposable family income is calculated by making the appropriate summations over all family members and is then adjusted for family size using the increasingly widely used "square root" equivalence scale whereby a family's needs are assumed to rise in a decreasing manner with number of family members.

The low income threshold is also based on an established international standard: 50 percent of median adjusted family income. For this analysis, the median was calculated in each of the years covered by the study (1992-96), with the average of these values used as the (fixed) threshold in all years. The measure is thus a relative measure (derived as it is from the distribution of incomes in the underlying population in each year), but then fixed over the period of analysis in order to allow us to study poverty dynamics over time around a constant threshold.

2.2 The Selection of the Working Samples

The analysis is restricted to non-students aged 20 years and over (no upper limit) who filed tax forms in all years 1992-96. Children are not directly included in this analysis since they do not typically file tax forms (at least not until the age of 16) and are thus not generally included in the LAD database. We do, however, analyse adults (20 and over) according to their family status, including the presence and number of children, and thus the situation of children is implicitly addressed by observing the income dynamics of their parents. (See the box for further details regarding the samples.)[4]

The Selection of the Samples

The lower age cut-off (those under 20 years are deleted) is somewhat arbitrary, but should eliminate students and others in the earliest stages of the school-to-work (and home-to-independence) transitions, for whom poverty status – and poverty dynamics – have a rather different significance than for others. The post-secondary student deletion, based on various education-related tax deductions, was implemented because it is difficult to know if such individuals share in their family's income, and again due to the special nature of any poverty situation for this group, who tend to be measurably poor but only out of choice as they make major investments in their futures.

The filing status restriction is imposed largely of necessity, because although imputed records are created for individuals who do not file tax forms if they are implicitly (or explicitly) identified by a filer, the Social Insurance Numbers of such individuals are not generally known, meaning that many such individuals cannot be followed over time as required for this dynamic analysis, while the information on their incomes (in particular) is also generally truncated. The restriction to those who were included on the database all five years also allowed for consistent samples to be used throughout the analysis, while also making the longitudinal verification of family status (see the text) easier and more effective.

Fortunately (as noted above), most Canadians do in fact file tax forms in every year, so this restriction is not as serious as it would be in the face of lower filing rates. Furthermore, in most cases non-filers are members of couples where the partners (typically) do in fact file tax forms, so that the record for individuals of the given family types (and age groups) can in fact be studied by proxy (as discussed). For example, whereas by far the greatest rate of non-filing is amongst elderly (attached) women, the spouses of such individuals are in fact well-represented in the samples and extrapolations can thus be made across the various sets of results as required. This does mean, however, that some of the distributions reported below (*e.g.*, poverty shares by age-sex group) should not necessarily be taken to be exactly representative of the underlying population in general.

2.3 Family Status

Family composition is determined in the LAD by matching individuals according to the information given on their tax files, including the imputation of non-filing family members (spouses and children) where appropriate. Individuals' declarations of common law marriage are treated as the equivalent of legal unions (with matches made in every case for such individuals), but the process also involves matching individuals assumed to be in undeclared common law relationships based on address matches, individuals' names and ages, and the identification of other individuals resident at the same address (if any). For this study, individuals were ultimately classified as belonging to one of the following family types: single (*i.e.,* no spouse and no children), married with no children, married with children, lone parent, and "filing child," the latter being a smallish group consisting of unattached individuals over the age of 20 deemed to be living with their parents. (See the box for further details regarding the treatment of family status in the LAD.)

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[4] See Finnie [1997c] for a poverty analysis based on market income which focuses entirely on families with children.

Family Status

The exercise of matching individuals into families based on the information given on individuals' tax forms (which is how individuals file taxes in Canada) is based on algorithms which have been developed at Statistics Canada over many years and which seem to be quite successful in achieving the goal of correctly matching couples and identifying the children in any household, with such a positive evaluation based on *a priori* assessments of the good sense which characterises the established algorithms, the inspection of micro records, and various checks with other data sources of the resulting totals.

Nevertheless, there remains an inevitable margin of error whereby some couples are not matched when they should be, others are matched where the indicated relationship does not actually exist, and the identification of children is similarly imperfect. In particular, the LAD has too many lone-parent families relative to official estimates, especially in the earlier years.

On a cross-sectional basis, these matching errors are perhaps not so important. However, any longitudinal analysis based on tracking individuals across changes in family status is at much greater risk from these problems. For example, if a match were correctly made in one year, missed in the next year, and then made again in the third year, the man and the woman would each mistakenly appear to have first been married, then unattached, and then re-married, and the associated income dynamics which were observed would be completely false. Furthermore, with divorce and remarriage being a relatively rare event in any given year, a relatively small number of such errors on a cross-sectional basis could comprise a relatively large proportion of individuals who change status from one year to the next and thus have relatively large effects in any associated dynamic analysis – especially one where family structure is so critical with respect to both the dependent variable (adjusted family income) and one of the key variables of analysis (*i.e.*, changes in family status).

These potential family status problems were addressed in this study by reflecting on the underlying concepts (*e.g.*, what exactly is the state of "marriage" in an economic context) and then conducting a detailed longitudinal analysis of the data in order to derive a series of editing rules by which the more problematic types of records could be deleted from the analysis. In particular, individuals were dropped from the entire study if over the 1992-96 period they were observed to i) change family status more than two times (2.1 percent of the sample), ii) change spouse more than two times (.1 percent of the sample), iii) separate from and then get back together with the same partner, unless the marital status code indicated separation or divorce in the in-between years (.5 percent of the sample), or iv) been matched to a given individual in a given year but not in either of the adjacent years (4.0 percent of the sample) in the case of those with no declaration on their tax forms.

Not surprisingly, this exercise reduced the movement across family types in the working samples, and also changed the poverty rates and poverty rate dynamics to a significant degree – thus verifying the importance of carrying out such a longitudinal cleaning of the database for this particular analysis.

2.4 Other Variables Included in the Analysis – and Some Notable Exclusions

Other variables included in the analysis are those which appear as regressors in the various econometric models estimated. These include the individual's age; province of residence (as of year end and thus where taxes were payable); whether or not the individual moved from one province to another from one year to the next; language (French or English – corresponding to the tax form used by the individual), including a "minority language" indicator (anglophones in Quebec, francophones in the rest of Canada); area size of residence (identified from the individual's postal code); and a series of calendar year dummy variables to capture cyclical effects and more general time trends.

There are a couple of notable omissions from this list. First, while it would certainly be interesting to include education in any analysis of poverty dynamics, the information is simply not available on the LAD database. Secondly, detailed job characteristics, including wage rates, hours of work, occupation, industry, and so on are similarly missing, precluding any detailed analysis of the role of labour market outcomes in the analysis. One can therefore imagine this analysis, which takes particular advantage of the LAD's size and excellent income information, as well as its basic longitudinal aspect, as being complementary to work undertaken with other databases where these other pieces of information are available.

3. The Cross-Sectional Setting

This section presents some cross-sectional results to act as introduction to the LAD database and put the dynamic analysis in context.

3.1 Low Income Rates, 1992-96

Average poverty rates for the tax-filing individuals included in the working samples for the 1992-96 period covered by this analysis shown in Table 1. (These represent the simple means of the annual rates which are given in the appendix, as is the case for the other cross-sectional results presented below.) These rates are roughly in line with those based on other data sources and other low income measures (*e.g.*, Statistics Canada [1999]).[5] Rates are, therefore, highest of all for individuals heading up lone parent families (52 percent for women and 31 percent for men), and also rather elevated for unattached individuals (23 and 25 percent for males and females respectively). Couples with children have much lower rates (10-13 percent), and childless couples are still better off (5-8 percent).[6]

The trends over time (see the appendix tables) are also interesting, with the period covered characterised by a lukewarm recovery from the early-90s recession and cut-backs in social assistance payments in many provinces, including Ontario (which has approximately 40 percent of the national population and thus affects the overall results to a commensurately large degree) after 1994. Thus, single individuals and childless couples, who are generally more dependent on labour market sources for their incomes, experienced steady (if moderate) declines in their low income rates from 1992 through 1995, while low income rates rose for lone parents and couples with children.

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[5] There are a number of reasons for these rates to differ from those reported elsewhere. First, the "square root" equivalence scale and the 50 percent of median low income cut-off used here correspond to international conventions more than to the typical Canadian approach, while the "close-to-census-family" family definitions used in the LAD also differ from what is typically employed, as does the precise treatment adopted here for adult children and parents in families where there are *only* adult children (their incomes are considered pooled but they are classified as if they lived apart). Also, as discussed in the text, the tax-based income coverage represented in the LAD is probably more accurate than in most survey-based databases, perhaps especially with respect to social assistance income, which is such an important source for low income families. Finally, the tax filer orientation of the LAD's sample frame has an under-representation of certain classes of (non-filing) individuals relative to the population at large – especially females with husbands who file, and particularly older ones, as discussed further below.

[6] The differences in the couple rates by sex are primarily due to the differential filing rates amongst older men and women mentioned above and discussed further below.

Table 1: **Low Income Rates by Sex and Family Type, Average Rates, 1992-1996**

	Percent	
	% Poor	Share of All Poor %
Male		
Single	25.2	16.1
Attached with Children	10.9	13.7
Attached no Children	8.2	10.4
Lone Parent	31.3	1.3
Filing Child	-	0.6
Female		
Single	23.1	19.9
Attached with Children	12.8	16.4
Attached no Children	5.3	5.2
Lone Parent	52.4	15.4
Filing Child	-	1.2

Note: Dashes (-) indicate cells with too few observations to report.

The distribution of the poverty population (of the working samples) by these same age-family type categorisations (also Table 1) reflects the rates of low income and underlying sub-population sizes which characterise each group. Despite their low incidence of low income, the greater numbers of attached individuals (*i.e.*, those in couples) in the population cause them to make up over half of the relevant low income population (46 percent for men and women combined). Singles make up another 36 percent, single parents (mostly females) comprise an additional 17 percent, and those in the "filing child" group make up the remaining 2 percent.[7] Thus, while there would always be reason to focus policy on the groups with the highest poverty *rates* (single parents in particular), truly significant declines in the overall rates of low income would clearly require decreases for some of the groups with already relatively low rates.

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[7] Low income rates are not reported for the latter group because their numbers are generally small and such reporting would in some cases necessitate the suppression of results for other groups according to the confidentiality rules which govern the LAD.

Breaking the low income rates down by age as well as family type (Table 2) indicates some significant variation in the patterns along this dimension. For example, the younger (20-39) and older (65 plus) female lone parents (the latter being a very small group) have significantly higher poverty rates than do those in the prime age group (40-64), while elderly singles do significantly better than their younger counter-parts, reflecting the poverty-relieving effects of both public and private pension schemes.

The figures also reflect more clearly one bias of the tax filer basis of the LAD database: a significant under-representation of elderly (attached) women, indicated by the gender differences in the poverty rates for these females and their male counterparts – a finding which has implications for some of the results which follow (as discussed where appropriate). The general notion is that i) the males are more representative of the situation faced by these older couples, and ii) the underlying population shares must be interpreted with this under-representation kept in mind.[8, 9] The table also shows the distribution of the poor with the age dimension taken into account.

3.2 Mean Incomes and Income-to-Need Ratios

Table 2 also shows mean adjusted real incomes (constant 1996 dollars) by age and family status, but the average income-to-needs ratios shown in the last three columns are probably more pertinent to this paper with its focus on low income, since these represent family income divided by the low income cut-off, thus showing income levels relative to that threshold.[10]

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[8] That is, the male-female differences in the low income rates of attached individuals are quite small for the younger age groups, reflecting the relatively high rates of filing by both members of such couples (*i.e.*, the similar rates for males and females reflect the same situation observed from each side), while for the older age group, the low income rates are significantly higher for men than women, indicating that women in low income families are less likely to file than are their partners (and also less likely to file than women in higher income families). This makes sense: higher income women are typically *required* to file by law (to pay the tax due), while those who are working also having incentives to file in order to recover over-payment of tax deductions and other payroll deductions.

[9] The low income rates would not in any case be expected to be *exactly* the same for males and females of a given age group because of the typically different ages of spouses. That is, women aged 20 to 39 will not always be the spouses of – and thus in the same families as – men aged 20-39, so that their incomes will differ, and so forth for the other age groups. The age cut-offs will also affect family representations to some degree for similar reasons, with more attached females than males likely to be lost from this restriction.

[10] All incomes were capped at the top 10th of the top percentile so as to prevent extreme outlier values from distorting the estimates.

Table 2: **Low Income and Income-to-Needs Ratios by Family Type and Age, 1992-1996 Averages**

	% Poor	Share of All Poor (%)	Mean Adjusted Income (1996$)	Mean Income-to-Needs Ratios		
				All	Non-Poor	Poor
Male						
20-39						
Single	26.0	7.1	23,300	1.99	2.49	0.58
Attached with Children	12.3	7.6	24,500	2.09	2.29	0.70
Attached no Children	6.8	1.5	34,860	2.98	3.15	0.64
Lone Parent	38.5	0.6	15,980	1.36	1.84	0.62
Filing Child	6.2	1.0	33,420	2.86	3.00	0.66
40-64						
Single	30.4	7.3	26,700	2.28	3.02	0.58
Attached with Children	9.5	6.0	30,680	2.62	2.83	0.66
Attached no Children	7.6	4.9	37,180	3.18	3.39	0.64
Lone Parent	26.6	0.6	21,960	1.88	2.34	0.60
65+						
Single	13.3	1.6	23,140	1.98	2.15	0.84
Attached with Children	19.4	0.1	22,540	1.93	2.21	0.75
Attached no Children	9.9	4.0	27,360	2.34	2.51	0.76
Lone Parent	39.6	0.0	16,280	1.39	1.82	0.72
Female						
20-39						
Single	26.8	4.3	21,740	1.86	2.31	0.61
Attached with Children	14.4	11.5	24,080	2.06	2.30	0.64
Attached no Children	5.8	1.2	36,600	3.13	3.28	0.64
Lone Parent	60.1	11.4	11,900	1.02	1.55	0.67
Filing Child	5.8	0.5	34,300	2.93	3.07	0.66
40-64						
Single	30.1	8.7	22,960	1.96	2.54	0.63
Attached with Children	10.0	4.8	31,080	2.66	2.88	0.60
Attached no Children	6.0	3.3	38,740	3.31	3.48	0.63
Lone Parent	38.0	3.9	16,800	1.44	1.93	0.64
65+						
Single	16.7	6.8	19,720	1.69	1.85	0.86
Attached with Children	16.1	0.0	22,640	1.94	2.17	0.73
Attached no Children	3.2	0.7	31,880	2.72	2.79	0.65
Lone Parent	48.8	0.1	14,320	1.22	1.70	0.72

Perhaps most notable here are the very low overall average (adjusted) income levels of female lone parents. For the youngest group, for example, lone mothers have incomes which are *on average* right around the low income cut-off, and the situation is not much better for the other age groups (1.4 and 1.2 for the prime and older groups respectively). The next lowest levels are for male lone parents, although their rates are typically one-quarter to one-third higher than those of their female counter-parts. (They are also, of course, much fewer in number.)

The advantages of childless couples with respect to disposable income are seen in these groups having the uniformly highest INRs – enjoying, on average, incomes approximately three times greater than the low income cut-off in the case of the two working age groups, and something less than this for the older groups (for which the males are the best indicator for the reasons explained above). Filing children also tend to be in families with high adjusted incomes. Couples with children come next, with total income levels roughly similar to the childless couples (figures not shown) but the extra needs associated with the additional family members (*i.e.*, their children) driving their INRs down. Singles have, on average, adjusted incomes which are significantly above those of lone parents but substantially below those of the other groups, especially in the case of females, the male-female differences principally reflecting the gender earnings gap for these individuals.

The table also presents income-to-needs ratios by poverty status. Interestingly, the depth of poverty for those who are currently below the low income threshold is about the same for all groups (in relative terms) – with adjusted incomes of these groups being mostly in the .6 to .7 range. The relative adjusted income levels of those *not* currently in low income show more variation, however, with the clearest departures indicating the generally low adjusted income levels of lone parents even when they are not actually below the poverty cut-off and suggesting that they are likely to be most at risk for entering poverty from one year to the next.

4. Descriptive Analysis of Low Income Dynamics

This section provides a "descriptive" (*i.e.*, non-econometric) analysis of low income dynamics, including annual rates of entering and leaving poverty by family status and related family type dynamics; empirical hazard rates of the probability of exiting low income after spells have already lasted a given number of years and analogous calculations for the rate of re-entering low income after escaping; the total number of years spent in low income, and the distribution of the poor in each year according to individuals' longitudinal low income profiles; summary assessments of what happens to the initial poor in later years with respect to their low income status and family structure; and the magnitude of the income changes associated with movements into and out of low income. Some of these elements – the annual entry and exit rates and the hazard models of exiting and re-entering low income – are picked up again in an econometric framework in the later sections of the paper.

4.1 Annual Rates of Entering and Exiting Low Income

4.1.1 Entering Low Income

Table 3 shows the average annual rates of entering and exiting low income for those individuals not currently in the relevant states by family status (and the related changes therein) 1992-96. The reported figures again represent the averages of the year-to-year rates over this the 1992-96 period, which are reported in the appendix, along with calculations based on family status and age where changes in family status are not taken into account.

By far the highest entry rates are for women who became single parents from one year to the next regardless from whence they came: from being single (30 percent), from being in a couple with children (47 percent), from being in a couple with no children (48 percent), or from being a filing child (a full 70 percent). These rates are thus seen to be in some cases astoundingly high, with most of the other rates in the table quite low in comparison. They contrast especially with women who remained with their spouses (entry rates of 4.6 percent in the presence of children, 2 percent in their absence) or single (4.8 percent), but are even much higher than those who were lone parents from one year to the next (average entry rates of 13 percent) – meaning that single mothers who were out of poverty in a given year (the group for which entry rates are calculated) probably had a good deal going for them relative to those just entering the state.

Table 3: **Annual Rates of Entry into and Exit from Low Income by Family Type Dynamic, 1992-1996 Average**

	Entry		Exit	
	Male	Female	Male	Female
Single (first year)				
Second year status:				
Single	6.1	4.8	18.7	18.8
Attached with Children	6.3	6.4	50.1	64.5
Attached no Children	3.3	3.1	63.6	74.9
Lone parent	16.2	30.0	20.5	12.3
Attached with Children (first year)				
Second year status:				
Single	12.1	22.6	36.3	33.7
Attached with Children	3.6	4.6	29.9	30.6
Attached no Children	2.6	2.2	42.7	42.3
Lone Parent	17.1	46.9	25.2	13.0
Attached no children (first year)				
Second year status:				
Single	11.1	15.7	43.4	34.9
Attached with Children	5.3	5.4	30.0	34.2
Attached no Children	2.6	2.0	34.4	38.9
Lone Parent	17.7	47.9	43.8	9.8
Lone parent (first year)				
Second year status:				
Single	6.2	7.1	37.3	35.9
Attached with Children	8.4	6.2	47.0	65.6
Attached no Children	-	-	67.6	75.4
Lone Parent	10.0	12.8	18.0	13.5
Filing child (first year)				
Second year status:				
Single	29.4	31.4	18.4	17.7
Attached with Children	18.1	21.1	27.8	25.0
Attached no Children	10.8	8.5	43.4	57.0
Lone Parent	40.0	70.3	12.5	6.3

Note: Dashes (-) indicate cells with too few observations to report.

Other fairly high rates of entry include women who went from being in couples to being unattached, especially those who left children behind (*i.e.*, the Attached With Children to Single row), and women who went from living with their parents (Filing Child) to being on their own or to being attached with a child.

For men, the patterns are qualitatively broadly similar, although not as dramatic. Thus, entry rates are highest for those who became a lone parent, but are not nearly as great as those for their female counterparts, and there are of course relatively few such cases, meaning that this dynamic is not very important to the overall story of poverty dynamics as compared to the situation for females. The rates for males who remained with a partner are of course similar to those for women (their partners on a statistical basis), while the rates of leaving such relationships are associated with significantly higher rates of entry into low income than for those who remained with their spouses, but again not as high as in the case of women.

One interesting case where the male and female records are quite similar, though, is for individuals who went from being a filing child to being on their own or having a partner and a child, with entry rates about as high as for males as females in the two cases (around 30 percent and 20 percent respectively). Furthermore, going from being a filing child to being attached with no children was actually *more* likely to result in an entry into poverty in the case of males than females (10.8 versus 8.5 percent). The point at which young people leave the parental home is thus observed to be a key transitional period in terms of the risk of entering poverty, and one which would presumably be of particular concern when children are involved.

Family status and changes therein are, therefore, powerful predictors of the probability of entering poverty, especially for women. We will, furthermore, see in the econometric results presented below that these family status effects dwarf all other influences in this respect. That said, these results must be put in the context that changes in family status are in fact relatively rare for any given person in any particular year, which is one reason why the low-but-steady rates which characterise individuals in couples, for example, leave persons of these types with non-trivial rates of low income in any given year and the largest shares of the low income population at any point in time (as seen above). Let us now, however, move closer to that more complete story by looking at annual exit rates.

There appears to be no *general* time trend to these rates (see the appendix for the relevant tables – entry by family type and age), but there are a few cases where such patterns do appear. First, the rates of entering low income for the younger group of males are all at least marginally higher in the later years than the earlier ones – a result which is consistent with other findings regarding earnings dynamics (as opposed to the income dynamics treated here) of this author and colleagues using these same data (Finnie [1997a-d], Beach and Finnie [1998], Finnie and Gray [1998]) as well as others regarding the declining labour market fortunes of this group, which would have been working in the same direction as the cut-backs in social assistance which occurred over these years.

Single parents (at least the non-elderly ones) also appear to have had significant increases in the probability of entering low income over this period, rising from annual rates of around 12 percent to between 15 and 20 percent in the case of the younger female group, and from around 8 percent to over 10 percent in the case of the older female groups, and even greater increases for the male lone parent groups. Such increases are particularly alarming if we believe there is an element of state dependence to being in low income, whereby simply being in low income in a given year makes it more likely that future years will be spent in the state as well – a hypothesis which is consistent with the duration model (and other) results presented below.

In contrast, the rates of entering low income did not change in any marked fashion for couples or the unattached, presumably reflecting the offsetting forces of a moderately improving labour market and the prevailing social assistance reductions in certain provinces over the period covered by the analysis.

4.1.2 Exiting Low Income

The (average) year-to-year poverty exit rates shown in the right hand columns of Table 3 largely represent the mirror image of the entry rate patterns just seen. (Again see the appendix for the annual rates and calculations by family status and age where changes in family status are not taken into account.) Thus, the highest rates are for lone mothers who became attached, this dynamic lifting an average of two-thirds (with children) or three-quarters (no children) of all such individuals out of low income in the year the event occurred. In contrast, lone mothers who remained in that state had extremely low rates of exiting low income – just 13.5 percent on average. In a similar vein, those who became lone mothers over the interval in question had similarly low (or lower) exit rates.

All-in-all, a woman who was in poverty in a given year and who was a single mother in the next had no more than about a 10 percent chance of escaping poverty over that period. This is an astounding statistic which points to a group deeply mired in straitened circumstances, often due to events beyond their own (sole) responsibility. Single females (without children) have similar patterns, although not as extreme: their rates of exiting low income are again very low unless they became attached (either with or without children).

Amongst males, the results are again broadly similar to those of females qualitatively but less dramatic quantitatively. Thus, single fathers had – interestingly – relatively high rates of exiting low income if they married and relatively low rates if they did not and those who became lone parents stood a relatively low chance of exiting low income in the relevant year, but the differences are in most cases not as great as for single mothers. The same holds for unattached males (singles): low rates of exit if they remained single, much higher if they married. The results for stable couples are, of course, relatively similar for males and females, as they should be (with the males again better representing the true situation due to their being the more consistent tax filers, especially for the older groups), with exit rates of 29.9 percent and 34.4 percent for those with and without children, respectively.

One final interesting result is that men and women with spouses and children who then became unattached had moderately higher rates of leaving low income than those who remained with their spouses, and this is also true for men (but not women) in relationships with no children. In short, leaving a relationship appears to sometimes be the route to leaving poverty, especially for men.[11]

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[11] This issue and the related implications are discussed in Finnie [1993, 1994, 1995].

4.2 Empirical "Hazard" and "Survivor" Rates of Exiting and Re-Entering Low Income

4.2.1 Exiting Low Income

Tables 4a and 4b show the empirical "hazard" rates of leaving low income (see the box for an explanation of this term) – that is, the probability of exiting poverty after one year, after two years, and so on, for those who have experienced a given poverty spell of that length over the 1992-96 sample period. This provides a more precise view of the dynamics of exiting low income from the point of entry. To be included in these calculations, an individual's entry into low income must be observed over the 1992-96 interval (*i.e.*, "left-censored" spells are excluded). The figures thus capture the year-to-year exit rates of a representative sample of new poverty spells.

"Hazard" and "Survivor" Rates

The use of the term "hazard rates" in reference to the number of individuals who leave poverty – clearly a *good* thing – might seem curious to many readers, but there is a good reason for it, and at least this one time the obfuscation is not the responsibility of the economics discipline. As the text indicates, the hazard rates referred to here represent the proportion of individuals who leave low income on a year by year basis over the course of a given spell – as opposed to the number who leave in a given calendar regardless of how long they have been poor. The origin of this statistical concept lies, however, with the life sciences and was developed in the context of contracting illnesses, sucumbing to death, and so on – thus indeed referring to "hazards" as the ordinary person might think of them. Once developed, though, the name stuck – and fairly so in that it refers to a very particular statistical concept, and one for which it is difficult to think of a substitute term which is both more intuitive *and* connotes this particular notion. Hence its employment in this paper.

The reference to "survivor rates" with respect to remaining in poverty is perhaps equally counter-intuitive, but the source of the term is the same as the hazard rates just discussed (*e.g.*, surviving an illness) and should thus again make sense when one abandons the notion that the underlying event is good or bad and is instead only a particular statistical term.

"Hazard" and "survivor" rates are also used in the context of remaining *out of* poverty, perhaps bringing the concepts back onto a more intuitive footing for some readers.

The calculations in Table 4a are further restricted to individuals who did not change family status from the indicated year to the next in order to focus on those particular groups. The most important general result is that the hazard rates of exiting low income decline almost uniformly – and generally quite steeply – with the amount of time spent in low income: the longer a person has spent in low income, the lower the probability of leaving that state in a given year. By family status, the greatest (relative) declines in exit rates (*i.e.*, the steepest hazard functions) are for lone

Table 4a: **Empirical Hazard Rates and Survivor Functions Related to Exiting Poverty**

	Hazard Rates for Exiting				Survivor Functions			
	One Year	Two Years	Three Years	Four Years	One Year	Two Years	Three Years	Four Years
Male								
20-39								
Single	36.2	24.6	17.4	15.7	63.8	48.2	39.8	33.6
Attached with Children	46.7	32.7	26.2	25.7	53.3	35.9	26.5	19.7
Attached no Children	51.7	32.7	27.5	23.1	48.3	32.5	23.6	18.2
Lone Parent	30.4	17.7	12.0	12.5	69.6	57.3	50.4	44.1
40-64								
Single	32.8	21.7	16.7	14.2	67.2	52.6	43.8	37.6
Attached with Children	48.8	34.2	26.5	28.3	51.2	33.7	24.8	17.8
Attached no Children	47.6	33.9	29.8	26.4	52.4	34.6	24.3	17.9
Lone Parent	37.6	25.8	9.5	14.3	62.4	46.3	41.9	35.9
65+								
Single	52.8	32.9	22.2	20.0	47.2	31.7	24.6	19.7
Attached with Children	40.9	31.3	50.0	-	59.1	40.6	20.3	-
Attached no Children	54.2	49.7	60.6	40.6	45.8	23.0	9.1	5.4
Lone Parent	33.3	-	-	-	66.7	-	-	-
Female								
20-39								
Single	33.9	22.1	16.0	10.7	66.1	51.4	43.2	38.6
Attached with Children	47.0	33.2	25.4	27.1	53.0	35.4	26.4	19.3
Attached no Children	55.8	41.8	28.9	30.0	44.2	25.7	18.3	12.8
Lone Parent	26.8	16.1	10.9	10.9	73.2	61.4	54.7	48.8
40-64								
Single	33.4	24.5	18.8	15.3	66.6	50.3	40.8	34.6
Attached with Children	51.9	36.2	30.2	23.7	48.1	30.7	21.4	16.3
Attached no Children	52.9	37.9	31.6	24.3	47.1	29.3	20.0	15.1
Lone Parent	33.5	19.1	15.7	12.9	66.5	53.8	45.4	39.5
65+								
Single	53.5	35.6	24.0	15.5	46.5	29.9	22.7	19.2
Attached with Children	44.4	50.0	-	-	55.6	27.8	-	-
Attached no Children	64.7	39.7	46.2	16.7	35.3	21.3	11.5	9.6
Lone Parent	30.0	14.3	-	-	70.0	60.0	-	-

Note: Dashes (-) indicate cells with too few observations to report.

parents, with single individuals running a fairly close second. For low income spells which have already lasted four years (the maximum observed in the data), exit rates are typically in the 10 to 15 percent range for these groups. In short, such individuals are extremely unlikely to exit poverty at this point.

The (broad) policy implications of these findings are clear: there is a hard core of individuals who seem very unlikely to leave low income after a certain number of years in that state and for whom significant interventions would probably be required to provide much hope of them ever significantly improving their lot. (See the box regarding the interpretation of these declining hazard rates.)

Duration Effects: Unobserved Heterogeneity, "Pure" Duration Effects

Regarding the hazard and survivor rates, how should we interpret the general finding that the annual rates of leaving low income decline with the length of the spell? As is well known in the relevant literature, two principal factors are likely at work. First, individuals who were at any point more likely to leave low income ("escapers") were (by definition) more likely to have done so in the early years, leaving the remaining sample with an increasing proportion of individuals who were less likely to leave low income ("non-escapers") in the later years, or effectively, sample composition effects. Second, being in low income is likely to have direct causal effects in terms of actually reducing the probability of escaping the situation in subsequent years as individuals become more estranged from the labour market, face stigma, and encounter other disadvantages related to the actual passage of time spent in poverty.

Unfortunately, the data do not allow us to disentangle these "unobserved heterogeneity" versus "state dependence" (or "pure duration") effects. This is unfortunate, because this differentiation is especially important from a policy perspective – since the former effect would suggest the need to do something about the individual (or his or her situation) *per se*, such as improving labour market skills, providing good employment opportunities, and so on, while the latter generally suggest the need for policy options focused on early interventions which might somehow lift the individual out of low income before the situation deteriorated further simply due to the accumulation of time spent poor.

Regarding the declining re-entry hazard rates which are reported, the unobserved heterogeneity effects would thus be associated with a dynamic where, on the one hand, individuals who were "quicker-to-re-enter" *types* would in fact tend to do so sooner, meaning that the individuals who remained out of low income would increasingly be comprised of more "slower-to-re-enter" types, thus driving the hazard rates down over time (unobserved heterogeneity effects); and on the other hand, there would likely also be state dependence effects related to the time spent out of low income, as individuals become more integrated into labour markets, learn new skills, and so on, which would also contribute to a decline in re-entry rates over time (unobserved heterogeneity versus pure duration effects).

The survivor rates shown in the second part of Table 4a show the proportion of individuals likely to remain in low income after a given number of years – the (cumulative) inverses of the hazard rates just discussed. (Again see the box for an explanation of this concept). The relatively high exit rates for attached individuals at all points in time seen above result in their having relatively low survivor rates by, say, four years after the beginning of a given spell of low income (below 20 percent everywhere), while the survivor rates for the lone parent and single groups are approximately double this level (mostly between 35 and almost 50 percent). Again, as the exit rates implied, long spells of low income are relatively uncommon for some groups, but much more likely for others – this result carrying various policy implications regarding the need for short- versus long-term income support, the nature of the interventions which might be most appropriate, and so on.

Table 4b repeats the hazard and survivor rate exercise allowing for changes in family status; for example, a lone parent or unattached individual might have become married and thus stood a good chance of exiting low income, and that dynamic would be included in these calculations whereas such individuals were excluded from the preceding set of results. Not surprisingly, these show, in particular, significantly higher rates of leaving low income for singles and lone parents – precisely because (as seen in the annual exit rates shown above) their rates of exiting low income are much higher in the face of a change in family status (*i.e.*, if they marry). The results imply that that about one-quarter to one-third of singles and lone parents are likely to still be in low income after four years – rates which are still quite high, but not as bad as when the calculations are restricted to those who do not change status.

4.2.2 Re-Entering Low Income

Table 4c reports the rates of re-entering low income after ending a previous spell, with the calculations following the same sort of approach employed for the exit rates just discussed. The numbers are thus based on individuals who were first observed to exit a low income spell over the period covered (so that the beginning of the period of being at risk for re-entry could be observed), with annual re-entry rates then calculated as of each year spent out of low income. The results shown in this first table are again further restricted to individuals who did not change family status in the particular year indicated.

Table 4b: **Empirical Hazard Rates and Survivor Functions Related to Re-Entering Poverty**

	Hazard Rates for Exiting				Survivor Functions			
	One Year	Two Year	Three Year	Four Year	One Year	Two Year	Three Year	Four Year
Male								
20-39								
Single	44.2	31.8	25.2	21.5	55.8	38.0	28.4	22.3
Attached with Children	47.2	33.1	26.7	25.6	52.8	35.4	25.9	19.3
Attached no Children	49.9	31.6	25.7	19.1	50.1	34.3	25.5	20.6
Lone Parent	36.8	25.3	19.5	14.3	63.2	47.2	38.0	32.6
40-64								
Single	36.0	25.2	19.6	17.3	64.0	47.9	38.5	31.9
Attached with Children	49.2	35.1	27.5	26.1	50.8	33.0	23.9	17.7
Attached no Children	47.8	34.1	29.1	28.1	52.2	34.4	24.4	17.5
Lone Parent	42.7	27.2	19.5	20.0	57.3	41.7	33.6	26.9
65+								
Single	53.8	34.4	22.7	25.0	46.2	30.3	23.4	17.6
Attached with Children	46.7	38.1	42.9	-	53.3	33.0	18.9	-
Attached no Children	55.1	50.5	60.1	42.9	44.9	22.2	8.9	5.1
Lone Parent	58.3	50.0	-	-	41.7	20.8	-	-
Female								
20-39								
Single	44.2	30.7	25.2	21.5	55.8	38.7	28.9	22.7
Attached with Children	45.9	31.9	24.0	25.0	54.1	36.8	28.0	21.0
Attached no Children	53.6	37.6	23.6	23.8	46.4	28.9	22.1	16.9
Lone Parent	33.8	24.1	19.1	19.1	66.2	50.2	40.6	32.9
40-64								
Single	35.8	26.8	21.8	18.6	64.2	47.0	36.8	29.9
Attached with Children	51.8	36.5	29.7	23.2	48.2	30.6	21.5	16.5
Attached no Children	53.1	37.7	30.8	24.1	46.9	29.2	20.2	15.3
Lone Parent	38.7	26.1	22.0	20.3	61.3	45.3	35.4	28.2
65+								
Single	53.8	36.0	24.6	18.0	46.2	29.5	22.3	18.3
Attached with Children	53.8	33.3	-	-	46.2	30.8	-	-
Attached no Children	67.1	42.7	45.2	14.3	32.9	18.9	10.4	8.9
Lone Parent	48.6	30.0	25.0	-	51.4	36.0	27.0	-

Dashes (-) indicate cells with too few observations to report.

Table 4c: **Empirical Hazard Rates and Survivor Functions Related to Re-Entering Poverty (No Change in Family Type)**

	Hazard Rates for Re-Entering			Survivor Functions		
	One Year	Two Years	Three Years	One Year	Two Years	Three Years
Male						
20-39						
Single	25.2	15.9	12.7	74.8	62.9	54.9
Attached with Children	25.3	15.5	11.7	74.7	63.1	55.7
Attached no Children	13.9	9.2	7.0	86.1	78.2	72.8
Lone Parent	35.0	23.5	25.0	65.0	49.7	37.3
40-64						
Single	32.7	21.5	18.6	67.3	52.8	43.0
Attached with Children	24.9	15.8	9.6	75.1	63.2	57.1
Attached no Children	26.1	14.5	11.8	73.9	63.1	55.7
Lone Parent	33.9	26.3	27.3	66.1	48.7	35.4
65+						
Single	17.7	10.2	7.0	82.3	74.0	68.8
Attached with Children	25.0	18.8	16.7	75.0	60.9	50.8
Attached no Children	15.4	7.5	5.1	84.6	78.3	74.3
Lone Parent	50.0	-	-	50.0	-	-
Female						
20-39						
Single	21.7	13.5	11.6	78.3	67.8	59.9
Attached with Children	23.9	15.5	11.2	76.1	64.3	57.1
Attached no Children	11.9	7.9	5.0	88.1	81.2	77.1
Lone Parent	38.4	31.9	24.3	61.6	42.0	31.8
40-64						
Single	32.6	21.1	15.5	67.4	53.2	45.0
Attached with Children	24.9	15.4	10.7	75.1	63.5	56.7
Attached no Children	20.8	12.3	9.2	79.2	69.4	63.0
Lone Parent	32.6	22.8	21.0	67.4	52.1	41.1
65+						
Single	19.2	10.5	6.4	80.8	72.4	67.8
Attached with Children	22.2	25.0	-	77.8	58.3	-
Attached no Children	12.2	6.2	3.3	87.8	82.3	79.6
Lone Parent	45.5	33.3	-	54.5	36.4	-

Note: Dashes (-) indicate cells with too few observations to report.

Table 4d: **Empirical Hazard Rates and Survivor Functions Related to**

	Hazard Rates for Re-Entering			Survivor Functions		
	One Year	Two Years	Three Years	One Year	Two Years	Three Years
Male						
20-39						
Single	23.9	14.5	10.7	76.1	65.1	58.1
Attached with Children	25.6	16.3	12.5	74.4	62.3	54.5
Attached no Children	18.5	14.0	10.4	81.5	70.1	62.8
Lone Parent	32.6	22.4	20.0	67.4	52.2	41.8
40-64						
Single	32.0	21.0	18.1	68.0	53.7	44.0
Attached with Children	25.1	16.0	10.6	74.9	62.9	56.3
Attached no Children	26.4	15.8	12.7	73.6	62.0	54.1
Lone Parent	32.6	24.2	19.0	67.4	51.1	41.4
65+						
Single	17.7	10.2	7.2	82.3	73.9	68.6
Attached with Children	22.6	17.2	8.3	77.4	64.1	58.7
Attached no Children	14.8	7.8	5.6	85.2	78.6	74.2
Lone Parent	42.9	-	-	57.1	-	-
Female						
20-39						
Single	20.9	12.6	10.2	79.1	69.1	62.1
Attached with Children	26.1	18.3	14.4	73.9	60.4	51.7
Attached no Children	16.1	11.9	8.2	83.9	74.0	67.9
Lone Parent	36.0	27.7	21.0	64.0	46.2	36.5
40-64						
Single	32.0	20.7	15.2	68.0	53.9	45.7
Attached with Children	25.5	15.9	12.0	74.5	62.6	55.1
Attached no Children	21.5	14.5	11.1	78.5	67.2	59.7
Lone Parent	31.4	20.2	17.0	68.6	54.7	45.4
65+						
Single	19.1	10.6	6.6	80.9	72.3	67.5
Attached with Children	18.2	16.7	33.3	81.8	68.2	45.5
Attached no Children	13.2	8.9	4.5	86.8	79.1	75.5
Lone Parent	39.1	22.2	-	60.9	47.3	-

Note: Dashes (-) indicate cells with too few observations to report.

Re-Entering Poverty (Allowing for Change in Family Type)

The first thing to notice is that the re-entry rates shown here are generally much higher than the annual entry rates for the population at large seen above, indicating that – not surprisingly – the probability of entering low income is generally much higher for individuals who have recently experienced a spell than for those who have not. For identifying a population at risk of entering low income, past experiences of low income thus seem to be a powerful predictor – a result which shows up again in the econometric models presented below.

Second, the usual family status effects are again observed with, in particular, re-entry rates being generally higher for lone parents and singles than for attached individuals. The differences are, however, not generally as great as for the more general annual entry rates seen above, suggesting that conditioning on previous poverty spells represents a stronger selection mechanism in the case of couples than for lone parents and singles – which makes sense, since low income is generally a more widespread experience amongst the latter groups.

Third, re-entry rates decline significantly with the number of years spent out of low income, but much more sharply for attached individuals than for singles and lone parents, so that by the third year (the longest post-poverty interval observed in the data), re-entry rates are around a fairly low 10 percent or below for attached individuals, somewhat above this for singles (with significant variation by sex and age), but still roughly around the 25 percent mark for single parents. In short, certain groups (the attached) are seen to be at relatively low risk of re-entering low income after the end of a previous spell, while others (especially lone parents) continue to tumble back in at relatively high rates even after a number of years – a dynamic which policy measures should presumably take into account.

The survivor rates seen in Table 4c again represent a useful summary representation of the cumulative risk of slipping back into low income after a previous exit. "Surviving" in this sense means remaining non-poor, and the rates after three years generally range from just over one-half to almost three-quarters for attached individuals, with the highest rates being where no children are present (especially for elderly couples). They vary more and are generally somewhat lower for unattached individuals (from around 45 percent for the prime age groups to over two-thirds for the older males and females), and are down to the 30 to 40 percent range for single parents – indicating that more than one-half of such individuals have fallen back into low income within three years of leaving a previous spell.

Table 4d repeats the re-entry calculations with individuals who changed family status included, but the rates do not generally change a great deal, again indicating that changes in family status are less critical to the dynamic of remaining out of low income after a previous spell than for certain other aspects of the low income experience. The differences which are observed, however, indicate that survivor rates are moderately higher for lone parents and singles, reflecting the greater probability of remaining out of low income for the individuals of this type who marry over the year in question, while the survivor rates fall slightly for attached individuals, due to the greater probability of moving back into poverty associated with a divorce or (in the case of initially childless couples) having a child. The direction of the differences by family status therefore remain as before (higher survivor rates for couples than singles and lone parents), but are moderately attenuated relative to the case where such changes in family status are not taken into account.

4.3 Total Time Spent in Low Income

4.3.1 The Consistently Poor, Sometimes Poor, and Never Poor

Having analysed the rates of entering into, exiting from, and re-entering low income, we now look at individuals' complete longitudinal poverty profiles by looking at i) the total number of years individuals spent in low income over the 1992-96 period covered by the analysis, ii) how the population of individuals in poverty in any given year has been split between the long-run and short-run poor, and iii) the distribution of the long-run poor by sex and family type.

4.3.2 Total Time in Poverty

Since an individual's family status can change over time, the "total-time-in-poverty" profiles are presented in two different ways. First, Table 5a shows the number of years spent in poverty for those who had the same family status all five years (1992-96). The most dramatic results are again for female lone parents, with just 31.1 percent remaining out of poverty all years and a full 36.0 percent poor in every year.

At the other end of the spectrum, just over 80 percent of the those who were consistently attached (*i.e.*, with a legal or common law spouse) never experienced a low income spell (focusing again on the more representative male figures), with similar rates for those with and without children (80.2 and 83.7 percent respectively). The never-poor rates rise even higher for filing children, to almost 90 percent. This latter result might help explain why such living situations are apparently becoming more common, especially when these are contrasted to the record for unattached individuals, for whom the poverty experience is considerably more widespread: just 60.2 and 66.3 percent of the unattached males and females were consistently non-poor and chronic poverty characterised 16.4 and 13.3 percent of the single males and females, respectively.

Table 5a: **Total Number of Years Spent in Low Income for Individuals Who Did Not Change Family Type**

	0	1	2	3	4	5	Ever Poor
Total	76.8	6.7	4.0	3.2	2.9	6.4	23.2
Male	78.7	6.3	3.8	3.3	2.7	5.2	21.3
Single	60.2	7.9	5.5	4.8	5.1	16.4	39.8
Attached with Children	80.2	6.5	3.8	2.8	2.7	4.1	19.8
Attached no Children	83.7	5.5	3.2	3.3	2.0	2.2	16.3
Lone Parent	48.4	10.3	7.9	6.3	7.0	20.1	51.6
Filing Child	87.2	5.3	2.7	1.7	1.4	1.7	12.8
Female	75.0	7.1	4.2	3.1	3.0	7.0	25.0
Single	66.3	7.8	4.8	3.8	4.0	13.3	33.7
Attached with Children	76.2	8.1	4.7	3.4	3.0	4.6	23.8
Attached no Children	89.4	4.7	2.2	1.4	1.0	1.3	10.6
Lone Parent	31.1	8.6	7.8	7.3	9.4	36.0	68.9
Filing Child	88.3	4.6	2.5	1.6	1.4	1.5	11.7

In short, when looked at in a dynamic framework, being in poverty is generally relatively uncommon and only rarely chronic for most continually attached individuals and young adults living at home, is considerably more widespread for singles, and touches the great majority of those who were lone parents in every year at some point – with constant poverty actually more common than never being poor for lone mothers in particular.

Table 5b provides a more inclusive representation of the "total time" story as it relaxes the sample restrictions to include all individuals, including those who changed family type, classifying people by their family status in the initial year (1992). The first row in the table indicates that of the entire population (in the working samples), approximately three-quarters were never in low income, 5.9 percent were in low income every year, and the remaining 20.5 percent were in low income between 1 and 4 years. By sex, a greater proportion of women experienced more years of poverty at every point, the difference being greatest for those in low income all years (7.0 percent for women versus 4.7 percent for men).

Table 5b: **Total Number of Years Spent in Low Income by Family Type in First Year (1992)**

	0	1	2	3	4	5	Ever Poor
Total	73.6	8.1	5.0	3.9	3.6	5.9	26.4
Male	76.4	7.6	4.5	3.7	3.1	4.7	23.6
Single	61.2	10.0	6.6	5.3	5.5	11.5	38.8
Attached with Children	79.7	6.9	4.0	2.9	2.7	3.8	20.3
Attached no Children	81.9	6.2	3.7	3.5	2.2	2.3	18.1
Lone Parent	59.1	11.4	7.4	5.8	5.8	10.6	40.9
Filing Child	74.5	11.0	5.7	3.9	2.9	2.0	25.5
Female	70.8	8.6	5.4	4.2	4.0	7.0	29.2
Single	64.0	9.3	5.8	4.6	4.9	11.5	36.0
Attached with Children	72.7	9.0	5.6	4.2	3.7	4.8	27.3
Attached no Children	85.1	6.3	3.2	2.2	1.6	1.6	14.9
Lone Parent	33.3	11.7	9.9	9.5	11.5	24.2	66.7
Filing Child	74.4	11.0	5.8	4.0	3.0	1.8	25.6

Looked at from another perspective, 26.4 percent of the sample population experienced a spell of poverty over the five years covered by the analysis, and almost exactly one-half of those individuals (50.2 percent) could be classified as long-run poor in the sense that they were in low income more than half the time (three or more of the five years covered by the analysis).

By family status, the results generally resemble those observed in the previous table, the differences being greatest for lone parents and singles, who register lower rates of low income due to the improvements which are often experienced with marriage (*i.e.*, remembering that individuals who change marital status are included in this table whereas they were excluded from the preceding one).

Finally, these tables also allow us to compare the incidence of poverty when measured on a longer-term basis as opposed to the more conventional annual metric by comparing the "ever poor" columns with the average annual rates given in Table 1. The longer-term rates are of course higher. More interesting is that they range from 1.3 to 2.0 times the annual rates, with this ratio varying inversely with the overall level, meaning that poverty rates converge somewhat across family types in the longer term – effectively because there is less room for the already-high rates of lone parents (especially) and single individuals to increase from their already-high levels when measured on an annual basis. The long-run incidence of poverty is, then, in the 18-20 percent range for individuals who started the period with a partner (with or without children), 39 and 36 percent for unattached males and females respectively, and a full 68 percent for lone-mothers (41 percent for their male counter-parts).

4.3.3 Who Make Up the Poor in a Given Year?

Table 5c builds on these findings by showing the composition of the low income population in each year in terms of individuals' longitudinal poverty profiles over the full 1992-96 period. Perhaps the most interesting finding is that whereas the chronically poor (i.e., low income all five years) make up just 5.9 percent of the sample population (Table 5b), they represent (on average) 39.9 percent of the poor population in any given year (Table 5c). By sex, the share accounted for by the long-term poor is slightly higher for females than males.

Table 5c: **The Distribution of the Poor by Number of Years Poor**

		1992	1993	1994	1995	1996	All Poor Person-Years, 1992-96
All	1 year	15.7	9.0	8.2	8.3	13.9	11.1
	2 years	13.9	14.7	10.8	14.2	13.8	13.5
	3 years	14.8	16.2	19.6	15.6	14.6	16.1
	4 years	16.6	20.6	21.0	21.2	17.8	19.4
	5 years	38.9	39.5	40.5	40.6	39.9	39.9
		100%	100%	100%	100%	100%	100%
Male	1 year	16.8	9.6	8.8	9.2	15.1	12.0
	2 years	14.8	15.9	11.6	14.8	14.3	14.3
	3 years	16.6	18.2	21.8	16.2	14.9	17.6
	4 years	16.6	20.5	21.1	21.6	18.1	19.5
	5 years	35.2	35.7	36.8	38.2	37.6	36.6
		100%	100%	100%	100%	100%	100%
Female	1 year	14.9	8.5	7.7	7.6	13.1	10.4
	2 years	13.2	13.8	10.2	13.8	13.4	12.9
	3 years	13.3	14.7	17.9	15.3	14.3	15.1
	4 years	16.7	20.6	20.9	21.0	17.6	19.3
	5 years	41.8	42.4	43.3	42.3	41.6	42.3
		100%	100%	100%	100%	100%	100%

At the other extreme, the "briefly poor" (poor one year out of the five) make up just 8 to 16 percent of the low income population in any given year (11.1 percent averaged over all periods). The rest of the poor population as seen on an annual basis is divided amongst those with 2, 3, and 4 years of poverty.

The "good news" here is that low income rates could be cut by an impressive two-fifths for all time (more or less) if the just 6 percent of the population who are always poor could somehow be lifted out of poverty on a long-term basis, and the figure rises to 60 percent if we include those who are poor four out of the five years in the chronically poor group. The problem, of course, is that this is the most challenging group from a policy perspective precisely because the consistent nature of their low income experiences presumably stems from quite fundamental causes.

Nevertheless, if such individuals could, for example, be effectively brought into the labour market and given a solid start which allowed them to build at least minimally successful careers, the payback could be enormous – not only in social terms (*i.e.*, helping these individuals achieve better lives), but also with respect to the government expenditures required to support and otherwise deal with this core socio-economic underclass. Any successes in this respect would be additionally rewarding in a long-term sense to the degree they improved the life chances of the children involved. Even quite costly investments targeted at the long-term poor might, therefore, constitute a very worthwhile social investment.

4.3.4 Who Make Up the Long-Run Poor Population?

A final set of calculations based on these "total time" profiles flips the perspective to show how the always poor – as well as the never poor and the residual "sometimes poor" groups – are made up of individuals of the different sex and family types. For example, we know from the preceding tables that single mothers tend to have high rates of chronic poverty and that the consistently poor make up a sizeable share of the poor in any given year, but it remains to be seen to what degree single mothers (and others) make up the overall long-run poor population – this depending on the size of the underlying sex-family type group in combination with its dynamic poverty profiles.

The results in Table 5d show that whereas unattached individuals and single parents make up just 23.7 percent of the sample population (the "All" column), they represent a hugely disproportional 63 percent of the "always poor" group – reflecting their much higher rates of long-run poverty. Male lone parents comprise a trivial share of this group, due of course to their small numbers. Perhaps more surprisingly, unattached females (single, no children) make up a larger component of the consistently poor population (27.4 percent) than do single mothers (15.9 percent), while single males make up another large component (18.8 percent). Also, while attached individuals have low *rates* of long-run poverty (seen above), the large size of the underlying population groups leaves them representing a significant 36.3 percent of the long-run poor (males and females taken together).

Table 5d: **The Distribution of the Never Poor, Sometimes Poor and Always Poor for Individuals Who Did Not Change Family Type**

	Never Poor	Sometimes Poor	Always Poor	All
Male				
Single	5.8	10.3	18.8	7.4
Attached with Children	20.4	18.4	12.3	19.6
Attached no Children	21.4	16.5	6.9	19.7
Lone Parent	0.17	0.5	0.9	0.3
Filing Child	2.13	1.2	0.5	1.9
Female				
Single	11.4	16.1	27.4	13.2
Attached with Children	19.9	23.0	14.4	20.1
Attached no Children	16.4	7.8	2.7	14.1
Lone Parent	1.1	5.6	15.9	2.8
Filing Child	1.1	0.6	0.2	1.0
	100%	100%	100%	100%

While, therefore, their high rates of chronic poverty might be good cause to direct policy measures at single mothers, even delivering this group from long-run poverty *in its entirety* would reduce the size of the overall always-poor population by only about 16 percent, meaning that other groups would have to be helped in significant measure to diminish the number of long-run poor – and the poor in any given year – by any truly substantial amount.

Table 5e shows a similar set of calculations for all individuals, including those who changed family status over time (Tables 5d and 5e thus correspond to Tables 5a and 5c in terms of sample composition), but the general nature of the results holds.

Table 5e: **The Distribution of the Never Poor, Sometimes Poor and Always Poor by Family Type in First Year (1992)**

	Never Poor	Sometimes Poor	Always Poor	All
Male				
Single	7.6	12.1	17.9	9.1
Attached with Children	19.7	14.6	11.7	18.2
Attached no Children	19.8	13.6	7.1	17.8
Lone Parent	0.6	1.0	1.3	0.7
Filing Child	3.5	3.9	1.2	3.4
Female				
Single	10.6	14.6	23.9	12.2
Attached with Children	18.3	20.2	15.2	18.6
Attached no Children	16.0	8.9	3.8	13.8
Lone Parent	1.9	8.7	17.4	4.2
Filing Child	2.0	2.3	0.6	2.0
	100%	100%	100%	100%

4.4 What Happens to the Poor?

We now look at how family status and low income dynamics are related by looking at those who were poor in 1992 in terms of their combined family-poverty status in 1996, four years later (Table 6). Turning first to female lone parents, 52.8 percent were again low income lone parents in 1996, while another 15.3 percent had changed family type (become married or no longer had their children) but still remained poor, for a total of 68.1 percent still in low income four years later.[12] Only 11.5 percent were still single parents but no longer poor (representing a poverty exit rate of just 18 percent for the continually lone parent types), while 20.4 percent were no longer single mothers and no longer poor (indicating an exit rate of 57 percent for this group). Overall, then, relatively few of those who were initially single mothers were relatively safely out of low income four years later.

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[12] Note that some of these individuals would have moved out of low income and returned in the intervening years (*i.e.*, not poor all five years); this table deals only with the two specific years in question.

Table 6: **What Happened to the Poor?**

Family Status, 1992	Same Family Status, 1996		Change in Family Status, 1996	
	Still Poor	No Longer Poor	Still Poor	No Longer Poor
Male				
Total				
Single	53.2	21.5	8.6	16.7
Attached with Children	44.6	37.7	8.6	9.1
Attached no Children	30.6	47.7	8.7	13.0
20-39				
Single	42.0	20.1	12.7	25.2
Attached with Children	47.8	40.1	6.4	5.7
Attached no Children	14.1	18.8	33.9	33.2
Lone Parent	41.6	11.8	23.6	23.1
40-64				
Single	65.1	20.7	5.3	8.9
Attached with Children	40.5	34.6	11.6	13.2
Attached no Children	42.6	45.4	6.3	5.7
Lone Parent	32.4	11.1	33.0	23.5
65+				
Single	59.8	33.3	1.4	5.5
Attached with Children	21.0	21.9	20.4	36.7
Attached no Children	24.9	59.9	2.3	12.9
Lone Parent	32.2	-	19.2	-
Female				
Total				
Single	56.2	25.4	6.1	12.3
Attached with Children	44.8	36.9	12.5	5.8
Attached no Children	26.2	38.2	17.1	18.5
Lone Parent	52.8	11.5	15.3	20.4
20-39				
Single	33.3	16.6	17.2	32.9
Attached with Children	47.4	38.4	11.3	3.0
Attached no Children	12.2	19.9	34.7	33.2
Lone Parent	55.6	11.2	13.1	20.2
40-64				
Single	63.6	25.8	3.4	7.3
Attached with Children	37.4	32.6	15.9	14.1
Attached no Children	34.6	47.8	9.4	8.2
Lone Parent	43.2	13.0	23.1	20.8
65+				
Single	65.5	32.1	0.6	1.8
Attached with Children	24.3	27.4	14.8	33.6
Attached no Children	22.6	38.4	12.2	26.9
Lone Parent	38.2	8.8	12.8	40.2

Note: Dashes (-) indicate cells with too few observations to report.

Amongst those who were initially attached with children, most (just over 80 percent) were in that same family status four years later (men and women alike), and just over half of these were still in poverty. Of the smallish number who did change family status (no longer married and/or no longer with children), more than half the males were no longer poor, while this was the case for only about a third of the females – again indicating that separating from their families has been a more common route out of poverty for men than women, especially amongst the younger groups (although the overall numbers are relatively small).

About two-thirds of the younger childless couples changed their family status over the period (*i.e.*, they had children or became unattached), while the prime age group was much more stable, but poverty rates were around 50 percent for each set of changers – for males and females alike. A smallish to moderate majority of those who did not change status were no longer poor in the later year.

Amongst singles, most were still unattached in the later period (75 and 82 percent for males and females respectively) – these rates varying by age in the predictable manner – and the great majority of these were also still poor. In contrast, of those who did get married and/or have children (quite common for the younger group, much less so for the others), the clear majority were no longer low income.

Finally, the situation of the elderly has largely been ignored in the above discussion, but their story is a fairly simple one. Almost all of those who were initially unattached were still single and about two-thirds of these were still poor four years later. In contrast, amongst the attached (and focusing on the dominant childless group) a clear majority were no longer poor in 1996 whether there was a change in family status (presumably the death of a spouse in most cases) or not. It should, however, be remembered that very few such couples were in low income to start with (Table 2), meaning that these dynamics pertain to quite a small proportion of the population.

4.5 How Do Incomes Change When Individuals Enter and Exit Poverty?

When individuals enter or exit poverty, are the underlying income changes generally large or small? Are they just slipping over the relevant threshold, or are the changes much more substantial, thus representing truly important shifts in standards of living? To answer these and related questions, Tables 7a and 7b present the relevant dynamics in terms of income-to-needs ratios (*i.e.*, adjusted family income levels relative to the low income cut-off).

Table 7a: **Income Changes in Year of Entering Low Income**

Percentage of Low-Income Cut-Off Before (When Not Poor)	**Percentage of Low-Income Cut-Off After (When Poor)**				
	75 - 100%	50 - 75%	25 - 50%	0 - 25%	*Total percentage*
100 - 125%					
percentage	29.3	9.6	2.9	2.3	44.1
row percentage	66.4	21.8	6.6	5.2	
column percentage	51.3	41.2	32.9	21.5	
125 - 150%					
percentage	11.8	4.9	1.9	1.7	20.3
row percentage	58.3	24.3	9.2	8.3	
column percentage	20.7	21.2	21.2	15.8	
150 - 200%					
percentage	9.3	4.7	2.0	2.5	18.5
row percentage	50.3	25.4	10.7	13.5	
column percentage	16.2	20.1	22.5	23.2	
>200%					
percentage	6.7	4.1	2.1	4.3	17.1
row percentage	39.3	23.9	12.0	24.9	
column percentage	11.8	17.5	23.3	39.6	
Total percentage	57.1	23.3	8.9	10.8	100%

Amongst those who moved into poverty in a given year, 29.3 percent of the entries observed over the full 1992-96 period (all individuals taken together) were relatively "small," involving movements within 25 percent of the low income cut-off either way (with the net changes obviously ranging from effectively zero to 50 percent). The remaining approximately 70 percent of the changes involved shifts of greater magnitudes, many of them quite large indeed with, for example, 17.2 percent of the movements involving declines from income levels more than twice the level of the low income cut-off in the previous year.

In a roughly parallel fashion, 32 percent of the movements out of poverty involved "small" changes in individuals' relative well-being (from within 25 percent under the poverty line to 25 percent over), 14.3 percent involved movements to income levels more than twice the low income cut-off, and the others involved movements of other magnitudes.

Table 7b: **Income Changes in the Year of Exiting Low Income**

Percentage of Low-Income Cut-Off Before (When Poor)	**Percentage of Low-Income Cut-Off After (When Not Poor)**				
	100 - 125%	125 - 150%	150 - 200%	> 200%	*Total percentage*
75 - 100%					
percentage	32.0	12.5	9.0	6.0	59.5
row percentage	53.8	21.0	15.1	10.1	
column percentage	67.0	59.9	52.6	42.2	
50 - 75%					
percentage	10.5	5.1	4.4	3.5	23.5
row percentage	44.5	21.6	18.9	15.0	
column percentage	21.9	24.3	25.9	24.7	
25 - 50%					
percentage	3.1	1.8	1.8	1.7	8.3
row percentage	37.3	21.4	21.2	20.0	
column percentage	6.5	8.6	10.4	11.7	
0 - 25%					
percentage	2.2	1.5	1.9	3.1	8.6
row percentage	25.0	17.3	22.1	35.6	
column percentage	4.5	7.2	11.1	21.4	
Total percentage	47.8	20.8	17.1	14.3	100%

The bottom line here is that the great majority of the movements into and out of poverty represent substantial changes in income, rather than smallish shifts at the margin.

5. Modelling Entry to and Exit from Poverty

5.1 Introduction to the Models

In this section, the entry into and exit from low income are analysed in an econometric framework which allows us to identify the effects of various personal characteristics and situational influences, including the important family status effects, on these dynamics. Models are presented separately for males and females of each (initial) family status, thus allowing the model's structure to vary along these dimensions. (See the box for further description of the models.)

The Econometric Models

In the approach adopted here, each pair of years over which an individual is observed comprises an observation which enters the estimation models, with the dependent variables defined as the probability that a transition occurs from being non-low into low income for the entry models, or from low income to non-low for the exit models – depending on the situation of the person in the first year of the pair of years in question. In each case, the regressors include the individual characteristics and other situational attributes listed in the model results which hold in the first year of each observed pair of years. The models thus represent a relatively straightforward conditional expectation function of the probability of moving into or out of low income from one year to the next conditional on the earlier period attributes and are estimated in a standard panel logit model framework, with the observations derived from the longitudinal sample scheme stacked over the full period covered by the analysis.

The models are estimated separately for males and females of each family status separately in order to allow the full structure of the model to vary along these dimensions, including the various family status effects. For example, the models reveal the effects of becoming a lone mother on the probability of entering low income separately for women who are initially single, women who are initially attached with children, and women who are attached without children (with the same done for men).

For each model, the results are presented in the conventional manner in the appendix, thus including the coefficient estimates and their standard errors and indications of which parameter estimates are "statistically significant" (*i.e.,* significantly different from 0 at the .05 and .01 confidence levels by two-tailed t-tests). The related probability effects shown here are calculated by first fitting a baseline probability for the transition in question for each equation which represents the predicted probability when each of the regressors (all of which are categorical variables) are set to the omitted categories. The probabilities are then re-calculated with each of the regressors "turned on" one at a time, thus yielding the resulting changes in the estimated probability of the transition in question.

5.2 The Annual Entry Models

5.2.1 The Baseline Probabilities

Table 8a shows the probability effects for the models of the probability of entering low income in a given year – estimated for those currently out of poverty. The baseline probabilities shown in the first row essentially represent the average rate of entering low income for those individuals who did not change family status over the period in question and who possess the other omitted/reference characteristics associated with the regressors included in the models: the presence of one child (in the case of the family types involving children), age 40-49, and an English speaking resident of Ontario (a relatively low-poverty province) living in a large urban area who did not move to another province over the relevant two-year period. The baseline results also pertain most directly to the 1992-93 period, as the calendar year dummy variables allow for general shifts in the probability of entering low income over the other years covered in the data.

The baseline probabilities line up quite well – as they should – with the simple annual entry rates shown in Table 2 (where changes in family status are considered) for those individuals who did not change family status from one year to the next.[13] Thus, after controlling for the other variables included in the models, lone parents (who remain in that state from one year to the next) generally have the highest probability of entering low income from one year to another, with rates of around 8 percent for males and females alike; singles come next, with rates in the

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[13] The relatively small differences between the two sets of findings stem largely from the fact that the regression baseline rates represent the specific groups just mentioned, many of which have lower than average entry rates, thus generally driving the baseline rates somewhat lower than the simple (overall) transition rates which appear in the earlier table.

Another reason these estimated probabilities do not line up exactly with those of the simple entry rates shown earlier is because the models embody particular functional forms with respect to both the regressors and the underlying stochastic processes, with the resulting predictions necessarily conforming to those forms. In particular, the logit specification represents a specific stochastic distribution (the extreme value formulation) which will fit the data only to an approximation, with any departures from a perfect fit likely to be greater for the stronger effects (as the function fits values which are further away from where the likelihood mass of the model is greatest).

6 percent range; while the predicted probabilities of attached individuals entering low income on a year over year basis are around the 2 percent mark.

Table 8a: **Probability Effects for the Annual Entry Models (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	6.37 **	2.41 **	1.85 **	7.84 **	5.80 **	2.88 **	1.69 **	8.23 **
Family Dynamics								
to Single	N/A	4.71 **	4.51 **	-3.93 **	N/A	13.86 **	11.12 **	-3.01 **
to Attached with Children	0.09	N/A	2.31 **	-1.93 **	1.92 **	N/A	2.75 **	-5.03 **
to Attached no Children	-2.41 **	-0.69 **	N/A	-3.48 **	-1.80 **	-1.03 **	N/A	-5.70 **
to Lone Parent	8.96 **	6.94 **	9.66 **	N/A	24.61 **	31.89 **	42.42 **	N/A
to Filing Child	-4.58 **	-0.60	0.69	-4.99	-4.14 **	—	2.28 **	-4.33
New Spouse	N/A	7.05 **	4.10 **	N/A	N/A	16.41 **	8.61 **	N/A
Number of Children (One)								
Two	N/A	-0.12 **	N/A	0.41	N/A	0.05	N/A	0.52 **
Three	N/A	0.61 **	N/A	0.82	N/A	0.77 **	N/A	2.93 **
Four	N/A	1.58 **	N/A	0.42	N/A	1.94 **	N/A	6.32 **
Five or more	N/A	3.20 **	N/A	3.51	N/A	3.66 **	N/A	9.26 **
Minority Language (ENG/FR)								
English-Quebec	0.73 **	1.00 **	-0.03	5.82 **	-0.10	1.42 **	0.05	1.59 **
French-ROC	-1.24 **	-0.47 **	0.32 **	0.41	-0.21	-0.39 **	0.18	-0.49
Age Group (Prime)								
20-29	0.64 **	2.51 **	-0.07	6.91 **	0.14	3.26 **	-0.13 **	13.74 **
30-39	-0.13	0.62 **	-0.12 *	2.20 **	-1.19 **	0.97 **	-0.20 **	3.79 **
50-59	1.36 **	0.57 **	0.53 **	-0.06	1.44 **	0.68 **	0.37 **	2.11 **
60-69	-1.12 **	2.58 **	0.73 **	7.56 **	-0.97 **	2.34 **	-0.52 **	10.39 **
70+	-3.29 **	1.70 **	-0.10 *	-1.55	-2.07 **	-0.16	-1.07 **	8.23 **
Province (Ont.)								
NFLD	4.19 **	2.04 **	2.00 **	1.65	3.20 **	—	1.80 **	-1.15 *
PEI	0.82	-0.35 *	0.52 **	-1.13	0.38	-0.48 **	0.03	-2.82 **
NS	1.27 **	0.32 **	0.76 **	1.90	0.96 **	0.02	0.66 **	-1.85 **
NB	0.79 **	-0.05	0.34 **	-0.73	1.03 **	-0.22 **	0.38 **	-3.21 **
QUE	0.13	-0.07	0.71 **	-2.65 **	1.46 **	-0.46 **	0.48 **	-3.56 **
MAN	0.36	-0.01	0.06	-2.24 *	-0.09	-0.27 **	0.13	-3.08 **
SASK	0.48	0.50 **	0.72 **	-0.86	1.24 **	0.08	0.61 **	-3.66 **
ALTA	-0.15	0.19 **	0.42 **	-1.29 *	1.18 **	0.09	0.43 **	-2.39 **
BC	-0.23	0.34 **	0.50 **	-0.06	0.74 **	0.35 **	0.73 **	-1.87 **
Mover	5.01 **	2.30 **	1.49 **	9.48 **	6.75 **	3.22 **	1.41 **	13.10 **
Area Size (500,000+)								
100,000-499,999	-0.59 **	-0.55 **	-0.34 **	-0.99	-0.18	-0.44 **	-0.30 **	0.39
30,000-99,999	0.16	-0.12 **	0.09 *	-0.06	0.61 **	-0.21 **	0.04	1.11 **
15,000-29,999	-0.44	-0.33 **	0.14	-2.04 *	0.59 *	-0.21 *	-0.06	1.66 **
0-14,999	0.72 **	0.30 **	0.80 **	-0.90	1.76 **	0.38 **	0.52 **	2.08 **
Rural Area	2.73 **	1.92 **	1.78 **	3.06 **	3.94 **	1.85 **	1.51 **	4.62 **
Year (1992)								
1993	-0.45 **	-0.14 **	-0.10 **	1.84 **	-0.92 **	-0.01	-0.04	0.42
1994	-0.08	0.17 **	-0.36 **	3.22 **	-1.16 **	0.34 **	-0.06	4.29 **
1995	-0.18	-0.01	-0.27 **	3.10 **	-1.02 **	0.21 **	-0.03	2.96 **

* Significance at the .05 level
** Significance at the .01 level
— The coefficient had to be suppressed to alleviate convergence problems.

5.2.2 Changes in Family Status

The most dramatic results are, not surprisingly, those pertaining to changes in family status, with the effects of becoming a lone parent the greatest amongst these, especially for women. More specifically, becoming a single parent (see the "to Lone Parent" row in the table) increases the predicted probability of entering low income from 5.8 percent to 30.4 percent for women who were initially single (*i.e.*, the baseline 5.8 percent plus the extra 24.6 percent indicated for that transition), from 2.9 to 34.8 percent for those who were originally attached and who had children, and from 1.7 to 44.1 percent for those who were initially in couples with no children. Conversely (but consistently), a change in family status *from* lone parenthood to any other category (read down the "Lone Parent" column which represents the model results for those who were initially lone parents) *decreases* the probability of moving into low income.

Having a spouse is thus seen to be the thread by which many woman remain out of poverty – revealed here in a much more direct and precise manner than previous static analyses which look only at current marital status and current poverty status. For men, the effects of becoming a single parent on the probability of moving into low income from one year to the next are also all statistically significant, and substantial, but much smaller than for females.

Becoming single (see the "to Single" row) also increases the probability of entering low income in most cases, especially for women. The greatest effect here is for those initially attached with children, for whom the probability of entering low income rises from 2.9 percent to 16.8 percent. The exception to the "to single" rule is where the individual (male or female) was already a lone parent (mentioned above) – and was thus moving from a very high risk state (lone motherhood) to one generally not quite as bad (single).

The birth of a first child (*i.e.*, the "to Attached with Children" set of effects) has a moderately small influence in absolute terms on the probability of entering low income for both individuals who were initially single (who thus also married over the period in question) and those who were initially members of childless couples. For the latter case, though, the probability of entering low income is more than twice as likely as for the baseline "no Children" group (1.9 versus 4.2 percent in the case of men, and 1.7 versus 4.5 percent in the case of women): that is, having a first child more than doubles the probability of entering poverty for couples. This event is, furthermore, a relatively common one, meaning that the overall effect of starting a family on entry into low income is significant in terms of the absolute numbers involved.[14]

Moving from any other family status to being attached with no children is uniformly associated with declines in the probability of entering low income in a given year, reflecting the fact that this is the group with the lowest of all poverty rates (in terms of both the levels of poverty rates in any given year and entry rates) – for men and women alike.

Moving back into the parental home ("to Filing Child") generally appears to represent a form of economic refuge, with this dynamic associated with significant declines in the probability of entering low income for singles and lone parents (although not significantly so for the latter).

Interestingly, being married in both periods but changing spouses over the relevant interval ("New Spouse") is associated with considerably higher rates of entering low income than remaining with the same partner, especially when children are present, with these effects being approximately twice as strong for females as males (*e.g.*, a probability of 19.3 percent as compared to the 2.9 percent for the baseline (same spouse) group.) This result seems counter to any notion that individuals typically change spouses at least partly for economic reasons – but see the exit rates below on this as well.

The effects of the number of children in the household (for the relevant individuals) are generally (but not uniformly) monotonically positive, but although most are statistically significant, they are not particularly strong (except for very large families). The exception is the case of single mothers, for whom the effects of each additional child are all rather substantial – a result which does not, interestingly, hold for single fathers.

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[14] The effects of the child might be to simply increase the family's measured needs, thus driving adjusted income down, or could include income changes as well, such as those associated with a woman (typically) cutting back on her labour market participation.

5.2.3 Age Effects

The differences in entry rates by age are mostly statistically significant but fairly small – especially compared to the family status effects just seen. It is, however, interesting to note the substantially higher rates of entry for the youngest age group (age 20-29) for individuals with children, these effects being especially strong for single mothers, for whom the estimated entry rates are almost three times those of the baseline ("prime") group: 21.9 percent versus 8.2 percent. The proportional effects are almost as strong for couples with children, but from much lower baseline probabilities, with the youngest group having a predicted rate of 4.9 percent rather than 2.4 percent in the case of males, and 6.2 versus 2.9 percent in the case of females. These results have potential policy implications, especially in a context where there is evidence of significant duration and occurrence dependence (reported below), since the high rates of entry amongst the younger groups might have enduring influences on these individuals' low income experiences for many years to come.

5.2.4 Province, Language, and Area Size Effects

The province effects are mostly quite small (Newfoundland is an exception), except in the case of single parents. The results for this group are, however, somewhat surprising. For lone mothers, in particular, the coefficient estimates are uniformly significantly negative, meaning that holding other factors constant, the rates of entry into poverty are higher in Ontario, the omitted category against which the other province effects compare. This finding would seem to indicate that the social assistance system in Ontario – the wealthiest province – has been significantly less effective at preventing single mothers from falling into poverty than has been the case in other jurisdictions.[15]

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[15] These results do not, however, explicitly identify the separate influences of labour market outcomes and transfers on entry into low income, and potential composition effects might be at play as well (*e.g.*, perhaps those out of poverty and therefore susceptible to entry in any given year comprise a rather different group in Ontario).

The estimated minority language effects are mostly rather small, although the generally higher entry rates for anglophones in Quebec are noteworthy.[16]

Moving from one province to another ("Mover") is fairly strongly associated with entry into low income for individuals of most family types, and for especially lone parents. This is an especially interesting finding – and to some degree puzzling – in the context of other work by this author which has found generally strongly positive effects of moving on individuals' earnings, at least for men, as well as the corresponding exit effects reported below. On the other hand, there are a number of possible explanations for these different effects, and the direction of causality might also be suspect here, with individuals who come up against difficult economic circumstances in a given year perhaps being more likely to move as a result of their difficulties.[17]

Regarding area size of residence, the clearest results are that individuals in rural areas have distinctly higher probabilities of entering poverty in a given year and that there is a fairly strong and more general inverse relationship between area size and the probability of entering low income for lone mothers, perhaps reflecting a reduced availability of the special sort of services, programmes, and labour market institutions which are most geared to this group in smaller cities, towns, and the countryside.

5.2.5 Calendar Year Effects

The only substantial calendar year effects point to a significant increase in the rate of entering poverty over the period covered by the analysis for lone parents – despite the fact that it was a period of economic recovery, albeit a rather sluggish and uneven one out through 1996 (the last year covered by the data). This deterioration presumably reflects the degree to which single parents are largely disconnected from the labour market and the decreases in social assistance payments, unemployment insurance, and other government services and transfers (upon which these families are so dependent) which were implemented over this period.

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[16] The language and province variables are defined together such that the Quebec province indicator is constructed so as to actually represent francophones in that province and the "English-Quebec" variable represents the difference in outcomes between that (local) majority and anglophones in that province, while the reverse holds for the other province variables and the "French-ROC" indicator, with the latter thus capturing the differences between anglophones and francophones in a given province. This specification works better than the more traditional use of province and language indicators which mix those two effects together.

[17] See Finnie [1998a, b] for an analysis of the effects of inter-provincial mobility on individuals' earnings. The results for low income dynamics reported here are not, however, necessarily inconsistent with those earlier findings. In particular, the estimated earnings effects were broken down by province and varied a great deal from one jurisdiction to another, with movements from the largest and wealthiest provinces actually associated with negative effects on earnings in many cases. The earnings analysis also allowed for a period of adjustment after the move, with the effects estimated only after individuals had been in the new province for at least one full year. Finally, individual earnings dynamics are in fact quite a different thing than family low income dynamics – even as the latter is to some degree obviously related to the former.

These time trends – even though they are estimated over a fairly short period – are in some cases fairly substantial and potentially of long-term consequence. For example, the predicted rate of entry into low income for single mothers rose from 8.2 percent for the baseline 1992-93 transitions to 12.5 percent and 11.2 percent for the 1994-95 and 1995-96 intervals respectively. If this represents a longer-term shift or if the trend has risen even further still – which seems very possible in the face of continued spending cuts – higher poverty rates should be expected in the future as these extra entrants join the stock of the current low income population at faster rates than before. (Note the advantage of looking at entry rates rather than overall rates in this respect.)

5.3 The Annual Exit Models

5.3.1 The Baseline Probabilities

Table 8b shows the results for the annual exit models. The baseline probabilities represent individuals with the same characteristics as those in the entry models: no change in family status over the period, one child (where relevant), age 40-49, English speaking resident of Ontario living in a large urban area who did not move to another province, and the 1992-93 calendar year period. These again line up quite well with the simple transition rates seen earlier (Table 2): controlling for other factors, annual exit rates are highest for attached individuals and lowest for singles and lone parents.

5.3.2 Family Status

The initial focus is once again on the family status effects, and the strongest and most important of these once more pertain to lone mothers. For those initially in this status (see the relevant column), *any* change in family status is associated with a large increase in the probability of exiting poverty (relative to the omitted group representing those who remain single mothers).

Becoming attached with children (*i.e.*, marrying) increases the predicted exit rate from 29.3 to 84.1 percent, the increase is even greater for those who become attached but no longer have children, the effect is stronger yet still for those who become a filing child ("moving back home"), and remains quite significant for those who become completely on their own (*i.e.*, no partner and no children). The effects for single fathers are of the same general type, but not as strong (except for the very small group who became filing children).

On the other side of this particular family status dynamic, *becoming* a lone parent (see the "to Lone Parent" row effects for the other family status models) is associated with strongly negative effects on the probability of exiting low income (except for a statistically non-significant effect for males who were originally in childless couples – a rare dynamic). For women, the expected probabilities of exiting low income are generally lower for those who moved from some other status to become lone mothers than they are for those who were lone mothers to start with, again indicating that the precise point of entry into lone motherhood generally represents a particularly difficult period – a sharp cusp point – for women.

Similar effects to those for lone parents hold for individuals who were single in the initial year, for whom becoming attached (with or without children) or becoming a filing child is strongly associated with exiting low income. The effects are again stronger for females than males except for the filing child case. These results reflect the fact that such individuals are moving from a family status for which poverty rates are generally high (single) to ones where it is much lower.

One important difference for the single status relative to lone parenthood, however, is that *becoming* single (for those who are already poor) has positive effects on the probability of leaving low income, especially for men. The exit rate is, for example, 27.7 percent for men in childless couples who remain in that state but 43.8 percent for those who become single (*i.e.*, those who leave the relationship), while the analogous rates are 36.5 and 47.7 percent for those initially in couples with children. In short, leaving a relationship appears to be one route out of poverty, especially for men, but also for women.[18]

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[18] See the author's earlier work on divorce and child support (see references previously) for further discussion of the relevant issues.

Table 8b: Probability Effects for the Annual Exit Models (%)

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	18.92 **	36.53 **	27.67 **	28.41 **	20.07 **	39.77 **	40.50 **	29.30 **
Family Dynamics								
to Single	N/A	11.16 **	16.09 **	23.83 **	N/A	4.79	4.06 **	27.10 **
to Attached with Children	26.69 **	N/A	-5.18 **	32.56 **	46.76 **	N/A	-5.69 **	54.79 **
to Attached no Children	40.83 **	13.40 **	N/A	35.99 **	57.99 **	9.92 **	N/A	57.67 **
to Lone Parent	1.24	-2.20	4.96	N/A	-8.04 **	-19.40 **	-26.94 **	N/A
to Filing Child	63.11 **	49.89 **	49.81 **	64.81 **	67.65 **	—	38.78 **	63.64 **
New Spouse	N/A	6.73 *	43.34 **	N/A	N/A	13.73 **	34.30 **	N/A
Number of Child (One)								
Two	N/A	1.35 **	N/A	2.33	N/A	1.07 **	N/A	-0.49
Three	N/A	-0.25	N/A	2.91	N/A	-2.21 **	N/A	-3.93 **
Four	N/A	-3.02 **	N/A	1.43	N/A	-6.20 **	N/A	-7.50 **
Five or more	N/A	-8.89 **	N/A	-12.12 *	N/A	-10.90 **	N/A	-9.98 **
Minority Language (ENG/FR)								
English-Quebec	1.72 *	-6.78 **	-0.59	-5.33	3.10 **	-7.04 **	-1.45	-2.60 *
French-ROC	-3.33 **	2.43	-2.20	-4.71	-2.97 **	0.92	-4.54	-2.76
Age Group (Prime)								
20-29	8.48 **	-1.75 **	7.71 **	-6.53 **	7.28 **	-6.74 **	6.18 **	-8.82 **
30-39	3.66 **	-0.65	2.86 **	-3.37 **	2.60 **	-3.29 **	1.51	-3.75 **
50-59	-3.39 **	-2.47 **	-0.23	-5.49 **	-1.97 **	-3.18 **	-2.18 **	-3.96 **
60-69	8.28 **	-2.48 *	4.08 **	0.06	11.86 **	0.64	5.29 **	-2.23
70+	9.88 **	-1.58	4.52 **	5.81	10.47 **	3.83	1.09	7.09 *
Province (Ont.)								
NFLD	-10.12 **	-15.28 **	-10.74 **	-9.56 **	-13.62 **	-13.15 **	-17.49 **	-18.22 **
PEI	-3.41 *	3.48	0.11	14.25	-11.06 **	2.14	-5.87	-8.06 **
NS	-7.09 **	-8.80 **	-7.44 **	-8.58 **	-11.14 **	-8.81 **	-9.64 **	-16.24 **
NB	-7.32 **	-10.17 **	-6.77 **	-7.67 **	-11.40 **	-9.97 **	-9.19 **	-15.52 **
QUEB	-6.95 **	-5.51 **	-6.38 **	-7.17 **	-11.20 **	-6.45 **	-7.62 **	-15.03 **
MAN	-7.33 **	-9.72 **	-4.32 **	-16.30 **	-7.82 **	-8.31 **	-0.97	-14.97 **
SASK	-3.67 **	-6.19 **	-2.95 **	-9.36 **	-1.58 **	-5.99 **	-3.62 **	-14.91 **
ALTA	1.62 **	-1.86 **	0.53	-1.86	2.35 **	-1.94 **	0.04	-9.80 **
BC	-2.36 **	-0.11	-1.60 **	-5.68 **	-6.87 **	-0.84	-3.37 **	-5.75 **
Mover	4.34 **	0.72	-1.08	1.26	-0.12	-2.81 *	0.00	-7.88 **
Area Size (500,000+)								
100,000-499,999	0.16	1.86 **	2.52 **	0.51 **	1.84 **	2.83 **	5.24 **	1.30 *
30,000-99,999	1.33 **	0.33	0.54	-1.54	1.00 **	2.37 **	5.03 **	0.34
15,000-29,999	1.33	-0.52	1.00	-4.82	0.99	-1.17	3.25	0.79
0-14,999	1.94 **	0.28	0.33	-1.75	0.90 **	0.30	1.81 *	-0.46
Rural Area	0.47	-4.89 **	-2.54 **	-3.37 **	1.59 **	-6.19 **	0.31	-7.23 **
Year (1992)								
1993	1.30 **	1.54 **	1.85 **	-0.71	2.43 **	1.41 **	-0.56	-0.50
1994	0.14	-3.00 **	19.75 **	-6.07 **	1.29 **	-1.80 **	1.07	-5.32 **
1995	-1.37 **	-2.12 **	7.85 **	-7.59 **	-1.34 **	-2.78 **	-2.47 **	-6.34 **

* Significance at the .05 level
** Significance at the .01 level
— The coefficient had to be suppressed to alleviate convergence problems.

A change in spouse for those who remain married is also related to much higher probabilities of leaving low income, a result which is especially interesting in a context where spouse-changing was previously seen to be positively related to the *entry into* low income – that is, it seems to be a positive influence on both entering and leaving low income. Here, though, it is consistent with the preceding result that ending a relationship to become unattached increases exit rates.

Shifting from being attached with children to being attached with *no* children has a positive effect on exiting low income, presumably typically representing situations where children are leaving home and the family's income needs are thus diminished.

The effects of the *number* of children represent the mirror image of those observed for the entry models seen above: exit rates generally decline with the number of children, thus pointing to longer-run poverty amongst larger families. The effects here are, however, typically about as strong for couples as for single parents (which was not the case for the entry models).

5.3.3 Age Effects

Younger singles and childless couples (20-29 and 30-39), family types which are most dependent on earned income and at the point in the life cycle most strongly characterised by upwards earnings mobility (Finnie [1997a-c], Finnie and Gray [1998], Beach and Finnie [1998]), have considerably higher probabilities of exiting low income on an annual basis than do the prime age reference groups (aged 40-49) of these family types. Putting these results together with the higher entry rates for these age groups seen above also points to a generally more volatile situation for these younger individuals – that is, higher rates of both entry into and exit from low income. Older singles and couples (60-69 and 70+) are, however, also more likely to exit poverty than the middle-aged group, presumably reflecting the effectiveness of public and private pension programmes and other government transfers in helping these groups.

For couples with children and single parents, on the other hand, the younger groups have *lower* rates of leaving low income than the corresponding prime age groups (and others), presumably reflecting a combination of reduced labour market opportunities and a limited effectiveness of the social assistance and related transfer programmes upon which these groups often depend. Note that young couples with children thus have both higher rates of entering low income (seen above) and lower rates of leaving than do older ones – more "total" poverty stemming from both sides of the underlying dynamics.

5.3.4 Province, Language, and Area Size Effects

Exit rates across the provinces are, as expected (based on underlying economic performance), mostly significantly lower than for baseline Ontario, with only Alberta showing a more mixed pattern. The magnitudes of the effects are, furthermore, in many cases quite large, with 5 to 10 and even larger percentage point effects shifting the baseline exit rates down by one-quarter, one-third, or even more in some cases (compare the effects to the baseline probabilities in the first row of the table).[19]

Moving from one province to another has rather mixed effects, but the strongly positive effect it has on exiting low income for single men is perfectly consistent with related work on the effects of inter-provincial mobility on individuals' earnings, as these are estimated to be greatest of all (also strongly positive) for young single males – who are also the most likely to move (Finnie [1998a, b]). The strong negative effects of inter-provincial mobility on exiting low income for lone mothers would seem to merit further study – does, for example, moving tend to drive these women into poverty, or do they move *after* tumbling into straitened circumstances?[20]

The majority of the minority language effects are not individually statistically significant, but unattached anglophones in Quebec generally exit poverty at slightly higher rates than their francophone compatriots, perhaps due to their more enhanced sets of options in terms of moving elsewhere (*i.e.*, out of the province). In contrast, anglophone couples with children and lone mothers do worse than the majority francophones, while francophones in the rest of the country do worse than their anglophone neighbours, perhaps reflecting a diminished availability or effectiveness of related services, more limited job market opportunities, various selection processes, or other factors.[21]

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[19] It should also be noted that the lower exit rates in certain provinces might be directly related to the different entry rates to at least some degree (with there perhaps being no "inconsistency" at all in the entry and exit rate patterns), in that the individuals who enter low income in the poorer provinces (where entry rates are – *ceteris paribus* – apparently lower) might be a generally "tougher" group of low income individuals who would therefore *be expected* to have lower exit rates as well. Such selection/composition effects could be addressed in the sort of more detailed analysis of the inter-provincial patterns which has just been suggested.

The clearest effect with respect to area size of residence effects is that exit rates are in most cases significantly lower in rural areas, the mirror image of the entry rate patterns, and again especially so for lone parents. The underlying factors once again presumably including different labour market structures, the reduced availability of services, social isolation, and so on. For some other groups, though – couples with and (especially) without children in particular – exit rates are higher in the smaller urban areas and towns relative to the large urban centres (the omitted category).

5.3.5 Calendar Year Effects

Finally, the calendar year effects point to clear improvements over time for one group of individuals – attached men with no children – versus more neutral or negative trends for all others.[22] The greatest deterioration is again seen for attached couples with children and, especially, single parents, with the exit rates of the latter group generally falling 5 to 7 percentage points from baseline levels of just under 30 percent for the 1992 reference year – thus indicating relative decreases in the 20 percent range.

The source of these trends would presumably be the major cut-backs in social assistance, unemployment insurance, and other transfer programmes which were not sufficiently offset by any positive earnings effects associated with the rather soft recovery which characterised the Canadian economy over this period. The net effects of the maintenance of those cuts along with additional reductions on a smaller scale versus the stronger economic recovery render any assessment of how the situation has evolved over the more recent period rather difficult and one which only further empirical analysis will be able to resolve.

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[20] The reader is reminded of the very strong positive effects of mobility on *entry* for single mothers as well: inter-provincial mobility would seem to be a connected set of dynamics for this group.

[21] For example, many anglophone couples with children with opportunities in other provinces may tend to leave the province before actually entering low income (or thereafter), leaving a group which is less mobile or otherwise less likely to exit.

[22] The fact that the one positive effect does not also hold for women suggests it is largely confined to older men, for reasons related to the sample representation discussed earlier.

6. The Hazard Models: Duration Effects

6.1 Introduction

In this section, a hazard model framework is employed to estimate the rates at which individuals i) exit current low income spells on a year-by-year basis from the point of entry, and ii) re-enter another spell of low income after a previous exit. These models thus permit the estimation of the underlying duration effects – the relationship between the amount of time already spent in (or out of) low income and the probability of exiting (or re-entering) in a given year – which comprise interesting, important, and policy relevant aspects of the low income dynamic. (See the box for more details regarding the structure of these models.)

The Exit and Re-Entry Hazard Models

The estimation approach adopted here, which is consistent with standard hazard model methods, consists of first identifying the beginning of any low income spell observed for a given individual over the 1992-96 period covered by the data (as was done in the calculation of the empirical hazard rates discussed above). The probability of moving out of that state from one year to the next over the course of that spell is then estimated as a function of the various time-varying personal characteristics and situational attributes included in the annual exit models seen above *plus* the elapsed time spent in the spell to date, captured by a series of dummy variables indicating the current spell length (in years). In effect, once the event-based samples are constructed (*i.e.*, including only the observations related to spells where the entry into poverty is observed), the models very much resemble those that were used in the annual exit models presented above (including its logit specification) except that the duration terms are now added to the specification. The approach thus represents a hazard model specification which corresponds to the annual nature of the data and allows for the inclusion of time-varying co-variates and a very flexible form for the duration dependence terms.[23]

A similar approach is used to estimate the probability of re-entering low income after an individual has completed a previous spell, with the duration effects in this case corresponding to the elapsed time spent out of low income since the previous exit. These models thus estimate the evolution of the probability of falling back into low income over the time spent out of that state after a previous episode.

No effort is made to separate the effects of unobserved heterogeneity and state dependence ("pure duration" effects) with respect to the duration terms in these models, largely because such procedures are very cumbersome and rely on untestable hypotheses regarding the general structure and specific stochastic properties of the underlying variables.

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[23] This general approach is used by Huff-Stevens [1994, 1995] to analyse poverty dynamics, by Gunderson and Melino [1990] to model strike durations, and by Ham and Rae [1987] to analyse jobless durations, while Keifer [1990] shows that the likelihood function for this model corresponds to that of the standard logit model specification.

The findings are again presented in the more accessible probability framework and only the baseline probability, duration term, and year effects are shown here, as the results for the other variables generally resemble those for the annual entry and exit models seen above. (See the appendix for the more complete set of findings and the full regression model parameter estimates.)

6.2 The Hazard Exit Models

The samples used in the hazard models differ from those employed in the annual exit models seen above in that only observations for which the start of the low income spell is observed are included (see the box). In particular, individuals who were continually in low income over the sample period are excluded from the estimation samples.[24] As a result, the baseline exit probabilities reported in Table 9a are considerably higher than those shown for the annual exit models seen above since the most chronically poor are excluded. Both sets of results are meaningful and simply represent different perspectives of the low income exit dynamic: the hazard model results represent the probability of leaving low income at each point in time over a given spell for *a representative sample of low income spells* (as generated by the selection procedure of selecting all observations related to spells observed to begin over the 1992-96 period in question), while the annual models seen above represent the exit rates for *the representative "stock" of individuals in low income in a given year*. Such reasoning applies to the other parameter estimates of the models as well.

The key duration terms generated by the hazard exit models indicate how the probability of exiting low income shifts with the number of years already spent in that state. The results indicate that the probability of exiting low income in a given year declines substantially with the length of time the person has already spent in that state, the probabilities declining 16-27 percentage points after four years across the various groups. The rate at which individuals exit low income falls between 40 and 57 percent relative to the baseline rates (representing spells which have lasted just one year) – large effects by any standard.[25]

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[24] In technical terms, such spells are "left-censored" and cannot be included because the critical duration terms cannot be identified. Observations associated with "right-censored" spells are, in contrast, included in the estimation up to the relevant point. All this is standard with the hazard model approach.

Table 9a: **Probability Effects for the Hazard Exit Models, Selected Results (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	34.22 **	48.78	43.79 **	38.22 **	34.33 **	53.20 **	54.85 **	41.96 **
Duration (One Year)								
Two Years	-11.20 **	-13.89 **	-12.43 **	-11.50 **	-11.73 **	-13.84 **	-14.94 **	-12.10 **
Three Years	-15.79 **	-19.93 **	-14.99 **	-18.11 **	-17.05 **	-21.07 **	-21.12 **	-17.74 **
Four Years	-16.70 **	-21.10 **	-19.50 **	-18.40 **	-19.42 **	-21.05 **	-26.57 **	-17.78 **
Year (1992)								
1993	2.71 **	2.00 **	0.49	4.68	2.21 **	-0.28	1.32	-2.80 **
1994	1.50	-2.54 **	11.43 **	-3.88	3.20 **	-2.74 **	1.61	-6.75 **
1995	-1.81 *	-2.35 **	3.53 **	-6.59 *	-1.41	-4.49 **	-2.81 *	-10.46 **

* Significance at the .05 level
** Significance at the .01 level
— The coefficient had to be suppressed to alleviate convergence problems.

The fact that the magnitudes of the duration effects are roughly the same across the various models implies that the rate of exiting low income drops off to a similar degree over the course of a given spell for the different age-family type groups – an interesting and important (policy relevant) finding. It also means that exit rates do not generally "cross": the groups which have higher (or lower) rates of exiting poverty after one year generally have higher (or lower) exit rates after a greater number of years as well.

The specific shapes of the duration effects are also interesting, with the hazard rates generally declining quite steeply at first, but then largely flattening out by the final year, suggesting that the probability of exiting poverty declines most rapidly over the first few years of a spell after, which it remains at a more or less constant annual rate. The five years of LAD data used here thus appear to provide a good indication of the full shape of the relevant hazard profiles over time – a fortunate outcome in analytical terms.

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[25] More specifically, the probability of exiting low income in a given year falls from a baseline rate of 34.2 percent to 17.5 percent after four years in the case of single men (holding other factors constant), from 48.8 to 27.7 percent for attached men with children, from 43.8 to 24.3 percent for attached men with no children, and from 38.2 to 19.2 percent for single fathers. For women, the results are qualitatively similar, with exit rates falling from 34.3 percent to 14.9 percent for singles, from 53.2 to 32.1 percent for those attached with children, from 54.9 to 28.3 percent for those attached without children, and from 42.0 to 24.2 percent for single mothers. The declines in the exit rates after four years are, therefore, in percentage terms: 49.3, 43.2, 44.5, and 48.2 percent for the four male groups (in order), and 56.5, 39.7, 48.5, and 42.4 percent for the female groups.

For example, after four years spent in low income, single mothers (who remained such) would be predicted to have an approximately one-in-four chance of exiting low income in any given year (given the other baseline characteristics in the models) – as opposed, for example, to the greater than one-in-two chance of exiting low income for married women with children (and an even slightly higher rate for those without children). In the former case, 44 percent of those who remained single mothers would be expected to be still in low income after an *additional* three years, versus just 10 percent of those who remained married with children.[26]

From a policy perspective, these findings suggest that a given low income spell is likely to either end quite quickly or, once it has lasted a few years, to continue for a relatively longer period of time. (This is especially true for individuals from certain provinces and with certain other "low exit rate characteristics" as broadly indicated by the annual exit model results seen above or more precisely in the complete hazard model results reported in Finnie [2000]). Predictions of the amount of (future) time an individual is likely to spend in low income could thus be usefully based on the elapsed time of the current spell (along with other personal and situational attributes.) [27, 28]

The year effects largely correspond to those already seen for the annual exit models except that the exit rates drop off more sharply for single mothers – 10.5 points on a baseline of 42, a decline of a full 25 percent over the short period from 1993 through 1996. Put another way, the expected length of a given poverty spell increased especially sharply for single mothers entering that state over the 1992-96 period.

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[26] These calculations represent the relevant survivor rates assuming that the exit rates remain at their four year levels after that point in time – a not unreasonable assumption given the observed flattening of the hazard profiles seen above.

[27] The points regarding the contribution of unobserved heterogeneity versus "pure" duration effects to the observed patterns made in the relevant box earlier apply here as well.

[28] This is *not* to simply state the trivially obvious notion that longer spells can be identified after the fact, but to say rather that the elapsed length of a spell can help predict how much *longer* it is likely to last from a given point in time. In particular, for a given set of personal characteristics, individuals who have already spent a number of years in low income would be expected to spend more *additional* years in low income than someone who just started a spell. One could, at the same time, of course condition such predictions on other individual characteristics – including those represented in the model, which could be used precisely for such predictive purposes.

6.3 The Re-Entry Models

Table 9b shows the baseline probability, duration, and year effects for the hazard re-entry models. As with the exit models, the baseline rates differ substantially from those of the annual entry rate models seen previously, and again primarily due to the differences in the samples used in the two approaches. More specifically, the re-entry rates seen here are much higher than the more general entry rates seen above, reflecting the fact that those who have already experienced a low income spell over the period covered by the data are more likely to begin another spell than is the general population of non-poor individuals in a given year.

The extent of these baseline differences is in fact itself interesting, as it begins to give us an idea of the importance of "occurrence dependence" (as opposed to the duration dependence focused on in these hazard specifications) – a topic which is pursued further below. Thus, the annual entry models previously seen had baseline rates ranging from under 2 percent to around 8 percent, whereas the hazard specifications seen here generate rates which vary between 18 and 36 percent. In short, entering low income in a given year is at least several times more likely for individuals who have just completed a spell than for the general population – which might provide a useful guide as to where "anti-entry" policies should be targeted.

Table 9b: **Probability Effects for the Hazard Re-Entry Models, Selected Results (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	26.61 **	20.28 **	21.89 **	36.17 **	24.79 **	18.56 **	16.33 **	27.83 **
Duration (One Year)								
Two Years	-10.11 **	-7.88 **	-8.36 **	-7.47 **	-10.33 **	-7.45 **	-6.57 **	-8.92 **
Three Years	-13.24 **	-11.46 **	-11.86 **	-12.30 **	-14.58 **	-10.16 **	-9.28 **	-11.45 **
Year (1992)								
1994	3.26 **	2.43 **	-3.93 **	0.20	1.78 *	2.91 **	1.62 *	12.17 **
1995	3.33 **	1.55 **	-3.02 **	1.39	3.78 **	2.04 **	2.58 **	8.99 **

* Significance at the .05 level
** Significance at the .01 level
— The coefficient was suppressed to alleviate convergence problems.

As with the exit models, the duration terms are strong, here indicating that the rate of re-entering low income declines significantly with the number of years spent out of that state after a previous spell. More specifically, comparisons of the baseline rates (which implicitly represent individuals who have been out of poverty just one year) to those which obtain after three full years spent out of low income indicate that re-entry rates drop between 41 and 59 percent (in relative terms) across the different groups. Also of interest is that the greatest declines again come initially, although the hazard rates still fall to a significant degree from two to three years, suggesting that further declines might be observed were the data more extended.[29]

One important policy implication of these results is that efforts directed at helping individuals who have recently escaped low income from falling back into that state might have quite early and long-term benefits, since if such individuals could be helped through the first few years, the likelihood of re-entering would appear to then decline substantially. If, on the other hand, the estimated duration effects largely reflect unobserved heterogeneity (see previous discussions of this issue), any interventions would likely have to be of a more fundamental and sustained nature, such as improving individuals' labour market skills, providing child care, changing attitudes (providing hope and motivation), and so on.

Also of some policy relevance is that regardless of what the underlying factors might be, there are – unlike the exit models – some notable differences in the extent of the declines of the hazard rates by family type, with single parents (especially males) declining the least, and these smaller declines coming on top of baseline re-entry rates which are already the highest. Any assistance aimed at preventing re-entry into poverty offered would, therefore, appear to be required over different periods of time (and perhaps be of a different nature) for different groups of individuals.

Finally, the calendar year variables are almost all statistically significant and, in some cases, quite strong (attached females with no children are the only clear exception), and point to significant increases in the probability of re-entering low income over the period covered by the analysis for most groups. These shifts presumably reflect the cut-backs in social assistance, unemployment insurance, and other social programmes implemented by provincial and federal governments over these years, while also indicating that the underlying economic recovery did not extend to those individuals most at risk of (re-)entering poverty.

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[29] One less duration year is available for the re-entry models relative to the exit models due to the fact that the first year of exiting low income covered in these samples is the 1992-93 period, whereas entries into low income from 1991 to 1992 were included due to the fact that such individuals would almost certainly have done so even were social assistance income better reported in the earlier year (for obvious reasons), whereas the same could not be said about exits from 1991 to 1992 (a year in which social assistance income reporting improved in the LAD).

The shifts vary in magnitude, but are as great as around 10 percentage points for single mothers, thus representing relative increases of as much as 44 percent (for the 1994-95 period) in relative terms as compared to the baseline hazard rates for this group (representing the 1993-94 period). Not only, therefore, did given spells of low income increase in expected length over this period (as seen in the exit models just above), but so too did the probability of re-entering a subsequent spell. In short, escaping poverty and then remaining out of that state on any sort of longer-term basis became less common over this short period – obviously a very worrying trend.

7. "Occurrence Dependence": Past Poverty Experiences and Current Outcomes

7.1 Introduction

To what degree is entry into poverty or current poverty status related to an individual's past low income record? The notion of "occurrence dependence" is investigated here with two different models. The first is a variant of the annual entry models seen above where only the 1995-96 interval (the last one covered by the data) is covered and the regressors include the number of years the individual was in low income 1992-94.[30] The second is a simple logit specification of low income status in 1996 where the number of years spent in low income 1992-95 enter as explanatory variables.[31] The results are again presented in terms of the related probability effects and once more restricted to the baseline probabilities and the variables of focus: in this case the number of previous years in poverty. (The results for the other variables again resemble those of the entry models presented earlier and may be found in the appendix, along with the full set of regression results.)

7.2 Past Low Income Experiences and Current Entry into Low Income

Table 10a shows the findings for the 1995-96 entry models, The baseline hazards are generally lower than those found in the general annual entry models seen above, principally because – in the context of the 1995-96 entry dynamic being modelled and the presence of the poverty experience regressors included in the models (one, two, three years) – they implicitly represent the situation for individuals with no previous low income spells (over the observed interval) and all other particularities of the specific 1995-96 period, including, for example, the general shifts in entry rates indicated in the relevant calendar year variables included in the earlier specifications.

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[30] To be at risk of entering low income in 1995-96, the individual obviously must have not been in low income in the first of that pair of years, leaving the low income record over the preceding three years to be entered as regressors in the model.

[31] These are very simple *ad hoc* descriptive models.

Table 10a: **Probability Effects for 95-96 Entry, Selected Results (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	4.11 **	1.76 **	1.36 **	8.00 **	3.55 **	2.34 **	1.36 **	9.12 **
Years Low-Income (92-94)								
One	12.88 **	8.71 **	7.57 **	18.84 **	12.37 **	7.84 **	7.05 **	15.05 **
Two	20.23 **	15.76 **	12.42 **	28.70 **	22.42 **	13.49 **	12.62 **	25.42 **
Three	31.88 **	25.58 **	18.23 **	39.46 **	34.99 **	21.28 **	19.19 **	37.71 **

* Significance at the .05 level
** Significance at the .01 level
— The coefficient was suppressed to alleviate convergence problems.

With respect to the past poverty variables, the results show the anticipated strong relationship between the number of years previously spent in low income and the probability of entering low income in 1995-96 (obviously representing *re*-entry for those who have in fact had previous spells).

Thus, for individuals who were never in low income 1992-94 (and otherwise possessing the models' baseline characteristics), the probability of entering low income in 1995-96 was between 1.4 and 9.1 percent, depending on the particular family type and sex, whereas for those who were in low income all three of the earlier years (but of course not poor in 1995), entry rates ranged from 20.6 to 46.8 percent. Across the various groups, the entry rates of the "always poor" thus ranged from 5 to 15 times those of the "never poor," with the smaller differences being for the lone parent families which had relatively high entry rates to begin with.

Individuals' past low income records are, therefore, very powerful predictors of the probability of entering poverty in a given year and might thus be very useful for precisely targeting anti-entry policy efforts. For example, while single mothers with no previous low income spells (over the period in question) had a relatively high entry rate of 9.1 percent, this is actually lower than individuals of all other sex-family types who had as little as a single previous year in low income (attached men and women excepted) and only a third as high as those of many of the other groups for individuals observed to have already had three years of low income. That is, while lone mothers are a problem group in general – looking at recent poverty experiences would allow the identification of individuals of other types who are actually more at risk of entering poverty in a given year and directing poverty measures appropriately.

7.3 Past Low Income Experiences and Current Low Income Status

Table 10b shows the relationship between an individual's past low income record and his or her current low income *status* (poor versus non-poor). The effects of previous years spent in low income are even stronger here than in the entry models just seen, primarily because those other models were (necessarily) estimated for individuals not in low income in 1995, thereby excluding those with the most chronic low income profiles. Thus, whereas the baseline low income rates vary from 1.5 to 10.7 percent, effectively representing the relevant poverty rates of individuals with no previous years of low income, they immediately jump to between 16 and 35 percent for individuals with one previous year of low income, and continue to rise with additional years spent in low income, soaring as high as between 80 and 90 percent for those who were in low income all four previous years.

Table 10b: **Probability Effects for being Poor, 1996, Selected Results (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	5.30 **	1.82 **	1.51 **	7.97 **	3.81 **	2.95 **	1.45 **	10.65 **
Years Low Income (92-95)								
One	29.58 **	18.16 **	16.16 **	34.81 **	24.81 **	20.28 **	18.80 **	27.64 **
Two	47.09 **	33.97 **	29.84 **	53.64 **	45.20 **	34.87 **	28.43 **	45.61 **
Three	63.46 **	52.73 **	39.97 **	66.66 **	64.71 **	51.48 **	42.01 **	62.80 **
Four	86.86 **	77.59 **	74.19 **	84.43 **	88.82 **	78.54 **	67.77 **	89.29 **

* Significance at the .05 level
** Significance at the .01 level
— The coefficient had to be suppressed to alleviate convergence problems.

The general result, then, is again that individuals' past low income records are very powerful predictors of their future low income status. And once again, this finding is interesting, not only from a purely descriptive perspective, but also in terms of targeting policy with respect to reducing poverty rates and alleviating the burden which is experienced by those who enter the state.

8. Conclusion

8.1 Policy Implications

In presenting for the first time a general analysis of poverty dynamics in Canada, these findings have a wide range of policy implications, large and small, broad and specific. A few important general ones are now discussed.

8.1.1 Poverty Dynamics and Anti-Poverty Policy: Who Are the Poor?

With almost one-half of those who ever experienced a spell of poverty over the five years covered by the analysis in that state more than half the time and hence classified as being long-run poor, this study shows that there is a very sizeable group for whom policy measures should provide assistance of a rather fundamental nature, such as developing labour market skills, making work a feasible option (child care, *etc.*), helping with job search, providing longer-term income support until individuals get on their feet, and so on.

Furthermore, with just 6 percent of the population in low income in all years but this group comprising approximately 40 percent of the low income population in any year, the analysis makes clear that any truly significant reduction in low income rates would have to include a focus on the chronically poor and presumably involve the more activist measures just mentioned – as opposed to simple stop-gaps or short-run interventions – on a commensurately large scale.[32]

From a more positive perspective, while the long-run poor are surely the more difficult cases – the protracted nature of their poverty experiences presumably stemming precisely from the deep nature of their problems – they also represent the greatest potential policy payoff, in that improving the lot of this relatively small group would lead to greatly reduced overall poverty rates on a more-or-less permanent basis. Otherwise put, even if the underlying problems of the long-run poor are also the most challenging – and costly – from a policy perspective, the benefits of any success in helping them would clearly be large and lasting in purely economic and financial terms as well as from any social justice point of view.

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[32] The figures rise to 9.5 percent of the total population representing 60 percent of the poor in any year when those who are poor four years out of five are included and 13.4 percent of the population representing 75.4 percent of the poor at any point when those who are poor three of the five years are considered as well.

On the other hand, in addition to these long-term hard-core poverty types, the analysis has also shown that there is another substantial group – the other half of those who are ever poor – for whom poverty is more of a passing experience and, therefore, where less fundamental poverty-fighting measures, such as short-term income support, the re-tooling of existing job skills, a little extra help with job search, and the like, would probably be more appropriate.

8.1.2 Identifying the Different Types of Poor and Directing Specific Policy Initiatives

This dichotomy of poverty types (really more of a continuity but usefully thought of in terms of the binary classification adopted here) then raises the issue of how these two basic classes of individuals – the longer-run/dependent versus the more passing/independent poor – can be identified so that the different sorts of policy measures just described could be efficiently targeted at the soonest possible point in time. The findings presented here again provide a useful guide in this respect.

First in this regard, the analysis of entry, exit, and re-entry rates has identified a number of observable personal characteristics and situational attributes which represent good indicators of who is likely to enter poverty and the amount of time a person will spend in a current or subsequent poverty spell should that occur. These include sex, family status, age, province, language, and area size of residence. Such information could, therefore, be usefully employed to classify individuals in terms of the policy initiatives which would be most appropriate to their specific cases, and other analyses with the LAD database or others could probably provide additional information of this type.

The results also point to the powerful nature of the amount of time an individual has spent in a current poverty spell or has remained non-poor after a previous exit (*i.e.* the relevant "duration" effects) as well as the overall number of years recently spent in poverty ("occurrence effects") in terms of predicting poverty status at any point in time, the probable length of a given poverty spell, or the likelihood of entering another period of low income, meaning that individuals' current and past poverty records could also be very helpful for targeting policy measures.

8.1.3 The Need for Early Interventions

A further implication of the analysis stems from the finding that the rate of exiting poverty tends to decline substantially with the amount of time a person has spent in a current poverty spell and that the rate of re-entry similarly decreases with the amount of time an individual has spent out of poverty after a previous exit. These results thus point to the importance of early interventions to speed people out of poverty once they have entered or to prevent them from re-entering once they do manage to escape.

That is, while the relative importance of "unobserved heterogeneity" versus "pure duration effects" might be debated and investigated further, the face value of the empirical evidence presented here indicates that individuals get increasingly entrenched in poverty, that early interventions before this occurs are likely to be very important (and worthwhile) and that extra efforts at keeping individuals out of poverty in the first year or two after exiting a previous spell are similarly appropriate.

8.1.4 "Events" and Poverty Dynamics: The Special Case of Single Mothers

On a slightly different track, this study has also identified certain specific *events* – as opposed to current personal or situational attributes – which are associated with high rates of entry or re-entry into poverty or low rates of exit from that state and which thus point to other sorts of policy initiatives. Lone-motherhood is perhaps the best example in this regard. The high incidence of entering poverty at the point of becoming a lone mother, the longer poverty spells experienced by these women, the importance of marriage to their leaving poverty, and their high rates of re-entering poverty after a previous exit observed here have effectively rendered much more explicit and precise what cross-sectional studies have previously only intimated in a much blunter manner regarding the poverty experiences of lone mothers – and have thus reaffirmed the need to focus attention on this group in terms of anti-poverty policy from a much more informed perspective.

And while child support payments have undoubtedly risen since this time (thanks to the introduction of guidelines) and the generally strong labour market in the period since 1996 may have been of some help, the fundamental problems are that women typically earn less than men while having the primary responsibility for the custody of the children in cases of a marital break-up and that the generally even more vulnerable never-married group is growing in size. Only longer-run initiatives which address these underlying factors are, therefore, likely to make a substantial difference in single mothers' poverty experiences over the longer-run. Restoring public sources of income in the form of "old fashioned" social assistance or through the newer and sometimes more creatively innovative welfare-to-work programmes, would, however, almost certainly be needed to provide the support needed to deliver and keep single mothers and their children out of poverty in the nearer term.

On the other hand, the analysis has also shown that most of the poor in any given year – and the large majority of the long-run poor (83-85 percent) – are in fact *not* single mothers. With unattached individuals being the largest single group and couples representing another substantial part, policy initiatives clearly need to be directed at these others if overall poverty rates are to be reduced significantly.

8.1.5 Carrots, Sticks, a Strong Economy, and Getting It Right from the Start

What are the sorts of more "fundamental" measures which should be adopted to help the longer-run poor? Without getting into detailed specifics, it is worth noting that both common sense and the available empirical evidence (see Blank [2000a] regarding the U.S. record) indicate that successful anti-poverty programmes typically consist of three fundamental elements: carrots, sticks, and a strong labour market.

The carrots should typically include, on the one hand, the development of marketable skills, learning about job search, and making work feasible and worthwhile, including the provision of child care, helping with transportation, facilitating the purchase of the necessary clothes and other "tools of the trade," assisting with other work-related costs, and so on. It is equally important, however, to improve the financial incentives to work, such as allowing welfare recipients to keep a greater share of their benefits as their labour market earnings rise, providing direct wage subsidies, increasing earned income tax credits, and so on.

"Sticks," however – a disagreeable but perhaps useful term if only used to represent certain incentive structures coming from the other side – also appear to play an important role: individuals can be further encouraged to take full advantage of the opportunities provided with carefully designed benefit structures. Not, for example, workfare for its own, punitive sake or as a malevolent club directed at the most disadvantaged members of society in the absence of other pro-active initiatives, but instead initiatives like providing extra benefits as an additional incentive to take advantage of a set of real opportunities which are being offered and withdrawing those benefits if these are not acted upon in order to help prod those who have perhaps lost (or never learned) the ability, willingness, or hope required to better their lives in such ways.

Finally, a strong labour market is the tide that can float even many frailer craft, and the jobs obviously have to be there for any individual to make it into the economic mainstream and stay there.

Some specific programme initiatives could include, at the provincial level, a general shift away from traditional welfare programmes which provide income support and little else, towards the sort of pro-active initiatives intended to bring individuals into the labour market with real career opportunities of the type just described.

At the federal level, funds could be transferred from passive programmes, such as the child tax benefit, towards "pro-work" initiatives such as a USA—style earned income tax credit, which provides a refundable tax credit that benefits low income workers by, in effect, providing wage subsidies. (Attention should, however, be given to the work disincentive effects of the implicit tax-back rate of this programme – especially in the context of any related provincial initiatives, including any new ones along the lines mentioned below.)

The federal government could, furthermore, selectively borrow certain other elements from the bold experiment in welfare reform instituted in the US in 1996 by providing additional funds to the provinces to be spent on programmes of their own choosing as long as they met the broad goals of increasing the labour market participation of welfare programme recipients and – to craft a "kinder, gentler" variant of this sort of initiative for Canada – by including individuals' income levels (or poverty rates) as another element by which the provinces' performance would be judged and future monies allocated. Not only would such an initiative direct more funds towards the sorts of programmes that should both increase work *and* – in contrast to certain "workfare" programmes – the economic well-being of the affected individuals, but it would also generate a panoply of programmes which should both allow each provinces' unique needs to be met in the best manner possible while generating evidence on which programmes work best.

Such pro-active programmes are not inexpensive, and are indeed typically considerably more costly than traditional social assistance programmes in the short run, but should be seen as investments which hold the promise of large long-run payoffs if individuals can be made less dependent on cash handouts and are able to move into the economic mainstream and gradually move up the socio-economic ladder as their initial, supported footholds gradually lead to better jobs, higher earnings, and economic independence.

Such programmes might, furthermore, have additional long-run benefits as the next generation of potential welfare-dependants learns that, ultimately, they will be expected to work and will be given the incentives and opportunities to do so: they might as well move in that direction sooner rather than later, *before* becoming sucked into the welfare system. Even broader, longer-term benefits should be realized as the children of welfare families experience their parents developing work skills and moving into the labour market and having higher incomes as a result and they learn about the nature and value of work rather than a life of welfare dependency.

Yet while initiatives possessing these characteristics are likely to help many individuals in need of such assistance, preventative measures aimed at reducing the number of individuals in straitened circumstances in the first place might be the most efficacious – and fairest – policy route of all. Such measures could, on the one hand, be targeted on the more proximate causes of entry into long-term poverty, such as reducing the number of young single mothers who are unable to support themselves through family counselling and other pro-active programmes. At the same time, broader and even more basic measures might also be implemented, such as trying to ensure that as many individuals as possible enter adulthood possessing the skills required to build a meaningful career and thus support themselves and their families. Associated initiatives should probably extend right back to early childhood and even before, since this is where many of the most basic problems seem to find their origins. Making sure every child is well fed, adequately sheltered and physically safe, would, therefore, be a good starting point, followed immediately by the provision of a rich developmental environment, including an excellent school system, from the cradle through entry into adulthood. Even those who blame the parents of disadvantaged children and fear the adverse incentive structures which the provision of assistance to low income individuals can generate would surely see the benefits – and simple fairness – of ensuring a reasonable set of opportunities for the youngest members of society.

8.1.6 Province, Area Size, and Language Effects

Another implication of these findings derives from the provincial differences in poverty dynamics identified here, these presumably pointing to the need for national-level programmes. In particular, the significantly lower rates of exiting poverty for individuals in certain provinces, especially Atlantic Canada and the Prairies, point to higher numbers of longer-term poor requiring special measures in those jurisdictions. The fact that lone mothers tend to be particularly characterised by such differences is especially worth noting.

Regarding the minority language effects, the analysis has pointed to the potential benefit of implementing special initiatives in this respect as well – for anglophones living in Quebec as well as francophones in the rest of Canada.

The substantial effects of living in a rural area – generally lower exit rates but also higher entry rates in the case of lone mothers in particular – suggest that a focus along this dimension would be similarly appropriate. In other cases, large urban areas are also identified as problem areas.

8.1.7 The Time Trends

One final broad policy implication stems from the observed deterioration of the situation for the most dependent groups over the 1992-96 interval studied – couples with children and lone parents – despite the economic recovery which began and then took more force over this period. This dynamic points to the underlying dependency of these groups on government sources for direct income support and their vulnerability to the cut-backs which were implemented over this period and in subsequent years, while also indicating that a strong economy alone is not likely to be sufficient to raise these most vulnerable groups out of their straitened circumstances and that other interventions are required.

One particular contribution of this dynamic analysis which focuses on entry, exit, and re-entry rates is, furthermore, that it points to a significant deterioration of the longer-run poverty situation in a way which cross-sectional (annual) data could not, with *further* implications for *future* poverty rates as these effects gradually work their way through the system and slowly but surely drive up poverty rates in a way which the more traditional data sources and annual poverty measures would be slow to capture and unable to predict in anything like the same way. In thus providing a more sensitive measure of the underlying dynamics, this analysis also provides the opportunity for addressing the underlying problems before poverty rates rise too high or the longer-run poor get too stuck in their disadvantaged situations.

8.2 Parting Comments: Future Research

This is but a first analysis of poverty dynamics and future research could go in any number of useful directions. A few suggestions in this regard are offered here.

- Study further the records of individuals with specific patterns of low income dynamics – especially the long-run poor. What, for example, are their different sources of income at various points in time? – earnings, social assistance, and so on. What do their even longer-term profiles look like along various dimensions? What are the precipitous events in their lives (job loss, marital disruption, *etc.*) or do they tend to be on the economic edge from the beginning?

- In a similar fashion, probe more deeply the poverty dynamics of certain specific groups – such as lone mothers or younger individuals – whose poverty profiles are generally worse than others and perhaps deteriorating further over time.

- Add additional variables to the analysis, such as neighbourhood characteristics (general levels of education, average incomes, age profiles, immigrant population).

- Break down the specific factors which determine the movements into and out of poverty, such as identifying the percentage of such movements due to changes in individuals' earnings levels (head, spouse, others), those due to changes in transfer payments (perhaps even broken down individually, such as social assistance, unemployment insurance, and so on), those due to changes in family status *per se*, and so forth.

- Study social assistance dynamics and their relation to poverty dynamics, perhaps concentrating on long-run recipients and the long-run poor. It would be especially interesting to analyse the effects of recent welfare reforms on welfare participation, poverty status, and income levels generally. Which initiatives have really worked in the sense of getting people off welfare and into decent jobs, which appear to have simply punished recipients by cutting benefits, and so on?

- Investigate the inter-generational transmission of low income status and low income dynamics, which could be facilitated here by looking at individuals who are initially (in the earlier years of the data) observed in their parental families and then observing their situation in later years so as to identify the relationship between "childhood" income levels (and perhaps neighbourhood characteristics – see above) and later low income profiles.

- Compare the record of immigrants – whose cross-sectional poverty rates have been rising – with the general population, as could be facilitated by a matching of the LAD data with the "IMDB" database, another recently available tax-based longitudinal file which captures the entire population of immigrants who have arrived in the country since 1981, but which does not yet contain the sort of family level information which would be required to do such a comparative analysis of low income dynamics (which is of course defined at the family level).

The author has in fact already embarked upon some of these endeavours, while others remain completely open and many other useful projects could be identified. It is a cliché to say that a particular project has raised more questions than it has answered, but it can be said that in providing an initial survey of the situation, this study has at least provided a first view of poverty dynamics in Canada and should thus also constitute a useful starting point for future work.

Appendix

Additional Tables

Table A1a: **Low Income Rates by Sex and Family Type**

	1992	1993	1994	1995	1996
Male					
Single	26.7	25.6	24.7	24.7	24.6
Attached with Children	10.8	10.9	10.6	11.2	11.3
Attached no Children	9.2	9.1	8.8	6.9	7.0
Lone Parent	25.1	31.8	31.0	34.0	34.6
Female					
Single	24.8	24.0	22.8	22.0	21.9
Attached with Children	12.3	12.6	12.5	13.1	13.5
Attached no Children	5.8	5.2	5.1	5.0	5.4
Lone Parent	51.7	51.2	50.4	53.7	54.7

Table A1b: **Distribution of the Poor by Sex and Family Type**

	1992	1993	1994	1995	1996
Male					
Single	16.3	15.9	15.8	16.1	16.2
Attached with Children	13.3	13.5	13.5	14.2	13.9
Attached no Children	10.9	11.3	11.4	9.0	9.2
Lone Parent	1.2	1.1	1.2	1.4	1.4
Filing Child	0.8	0.7	0.6	0.5	0.4
Female					
Single	20.5	20.2	19.8	19.5	19.5
Attached with Children	15.4	16.1	16.3	17.0	17.0
Attached no Children	5.4	4.9	5.0	5.0	5.4
Lone Parent	14.5	14.8	15.2	16.4	16.0
Filing Child	1.5	1.3	1.1	1.0	0.9
	100%	100%	100%	100%	100%

Table A2a: **Low Income Rates by Family Type and Age**

	1992	1993	1994	1995	1996
Male					
20-39					
Single	27.8	26.1	24.9	25.3	26.1
Attached with Children	12.1	12.2	11.7	12.6	12.8
Attached no Children	7.7	7.0	6.3	6.5	6.8
Lone Parent	28.9	38.3	38.2	42.7	44.4
Filing Child	6.6	6.2	6.0	5.9	6.4
40-64					
Single	30.3	30.0	30.1	30.4	31.3
Attached with Children	9.2	9.4	9.4	9.8	9.9
Attached no Children	7.6	7.6	7.6	7.6	7.9
Lone Parent	21.5	27.0	26.0	28.9	29.8
65+					
Single	14.3	15.0	13.1	12.4	11.5
Attached with Children	17.2	19.9	19.6	20.1	20.2
Attached no Children	13.0	12.8	11.9	6.0	5.8
Lone Parent	40.9	44.4	40.0	40.4	32.3
Female					
20-39					
Single	30.1	26.9	25.8	25.6	25.4
Attached with Children	13.9	14.3	14.0	14.8	15.2
Attached no Children	7.0	5.6	5.1	5.4	5.9
Lone Parent	59.0	58.5	57.5	62.2	63.4
Filing Child	6.0	5.9	5.7	5.6	6.0
40-64					
Single	29.6	29.8	29.9	30.2	30.9
Attached with Children	9.0	9.6	9.9	10.5	11.0
Attached no Children	5.9	5.7	5.8	5.9	6.5
Lone Parent	35.6	36.3	36.9	39.6	41.8
65+					
Single	17.9	18.5	16.6	15.3	15.2
Attached with Children	13.8	18.6	14.9	17.2	16.0
Attached no Children	4.3	3.6	3.2	2.5	2.3
Lone Parent	53.1	57.4	42.4	44.4	46.8

Table A2b: **Distribution of the Poor by Family Type and Age**

	1992	1993	1994	1995	1996
Male					
20-39					
Single	8.6	7.5	7.0	6.6	6.0
Attached with Children	7.8	7.8	7.4	7.7	7.3
Attached no Children	1.8	1.6	1.4	1.3	1.2
Lone Parent	0.6	0.6	0.6	0.6	0.6
Filing Child	1.4	1.2	1.0	0.8	0.8
40-64					
Single	6.4	6.8	7.3	7.8	8.3
Attached with Children	5.4	5.6	6.0	6.4	6.5
Attached no Children	4.5	4.7	4.9	5.0	5.3
Lone Parent	0.5	0.6	0.6	0.7	0.8
65+					
Single	1.3	1.6	1.6	1.7	1.9
Attached with Children	0.1	0.1	0.1	0.2	0.2
Attached no Children	4.6	5.0	5.1	2.8	2.7
Lone Parent	0.0	0.0	0.0	0.0	0.0
Female					
20-39					
Single	6.1	4.7	4.1	3.7	3.1
Attached with Children	11.6	11.7	11.4	11.6	11.2
Attached no Children	1.7	1.3	1.1	1.0	1.0
Lone Parent	11.4	11.4	11.3	11.8	11.0
Filing Child	0.7	0.6	0.5	0.4	0.3
40-64					
Single	8.2	8.4	8.8	9.1	9.3
Attached with Children	3.8	4.4	4.8	5.4	5.7
Attached no Children	2.9	3.0	3.3	3.4	3.9
Lone Parent	3.1	3.4	3.8	4.4	4.8
65+					
Single	6.3	7.1	6.9	6.8	7.1
Attached with Children	0.0	0.0	0.0	0.0	0.0
Attached no Children	0.8	0.7	0.7	0.6	0.5
Lone Parent	0.1	0.1	0.1	0.1	0.1
	100%	100%	100%	100%	100%

Table A3: **Average Real Adjusted Household Income (1996$)**

	1992	1993	1994	1995	1996
Male					
20-39					
Single	22,300	23,000	23,600	23,800	23,800
Attached with Children	24,200	24,100	24,600	24,700	24,900
Attached no Children	33,600	34,100	35,000	35,800	35,800
Lone Parent	17,900	15,600	16,100	15,400	14,900
Filing Child	33,400	33,100	33,400	33,700	33,500
40-64					
Single	26,600	26,500	26,800	26,800	26,800
Attached with Children	30,600	30,300	30,700	30,700	31,100
Attached no Children	36,900	36,700	37,000	37,600	37,700
Lone Parent	23,300	21,400	21,900	21,300	21,900
65+					
Single	23,000	22,400	22,500	23,200	24,600
Attached with Children	24,100	22,400	22,300	21,700	22,200
Attached no Children	27,500	26,800	26,800	27,600	28,100
Lone Parent	15,800	15,100	15,300	16,200	19,000
Female					
20-39					
Single	20,500	21,400	21,900	22,300	22,600
Attached with Children	23,900	23,800	24,200	24,200	24,300
Attached no Children	34,900	35,900	36,900	37,500	37,800
Lone Parent	11,900	12,000	12,100	11,800	11,700
Filing Child	34,300	34,100	34,000	34,500	34,600
40-64					
Single	23,000	22,800	22,900	23,000	23,100
Attached with Children	31,500	30,900	31,000	30,900	31,100
Attached no Children	38,900	38,500	38,700	39,000	38,600
Lone Parent	17,200	17,000	17,000	16,500	16,300
65+					
Single	19,800	19,400	19,400	19,900	20,100
Attached with Children	25,100	20,700	22,400	22,700	22,300
Attached no Children	31,900	31,400	31,300	32,400	32,400
Lone Parent	13,600	12,500	15,200	15,200	15,100

Table A4a: **Mean Income-to-Needs Ratios**

	1992	1993	1994	1995	1996
Male					
20-39					
Single	1.90	1.97	2.02	2.04	2.04
Attached with Children	2.07	2.06	2.10	2.11	2.13
Attached no Children	2.87	2.91	2.99	3.06	3.06
Lone Parent	1.53	1.33	1.37	1.31	1.28
Filing Child	2.86	2.83	2.85	2.88	2.86
40-64					
Single	2.27	2.27	2.29	2.29	2.29
Attached with Children	2.61	2.59	2.62	2.63	2.66
Attached no Children	3.15	3.14	3.17	3.22	3.23
Lone Parent	1.99	1.83	1.87	1.82	1.87
65+					
Single	1.97	1.91	1.92	1.98	2.10
Attached with Children	2.06	1.92	1.90	1.85	1.90
Attached no Children	2.35	2.29	2.29	2.36	2.40
Lone Parent	1.35	1.29	1.31	1.39	1.62
Female					
20-39					
Single	1.75	1.83	1.87	1.90	1.93
Attached with Children	2.04	2.03	2.07	2.07	2.08
Attached no Children	2.98	3.07	3.16	3.20	3.23
Lone Parent	1.02	1.02	1.03	1.01	1.00
Filing Child	2.93	2.91	2.91	2.95	2.96
40-64					
Single	1.96	1.95	1.96	1.97	1.98
Attached with Children	2.69	2.64	2.65	2.64	2.65
Attached no Children	3.33	3.29	3.31	3.33	3.30
Lone Parent	1.47	1.45	1.45	1.41	1.39
65+					
Single	1.69	1.66	1.66	1.70	1.71
Attached with Children	2.15	1.77	1.91	1.94	1.91
Attached no Children	2.73	2.69	2.68	2.77	2.77
Lone Parent	1.16	1.07	1.30	1.30	1.29

Table A4b: **Mean Income-to-Needs Ratios by Low-Income Status**

	1992	1993	1994	1995	1996
Not Low Income					
Male					
20-39					
Single	2.42	2.45	2.49	2.53	2.56
Attached with Children	2.26	2.25	2.29	2.31	2.34
Attached no Children	3.06	3.08	3.14	3.22	3.24
Lone Parent	1.87	1.78	1.85	1.84	1.83
Filing Child	3.01	2.98	2.99	3.02	3.01
40-64					
Single	3.01	2.98	3.02	3.03	3.07
Attached with Children	2.81	2.79	2.83	2.84	2.88
Attached no Children	3.36	3.35	3.37	3.43	3.45
Lone Parent	2.37	2.28	2.31	2.32	2.42
65+					
Single	2.16	2.10	2.08	2.14	2.26
Attached with Children	2.34	2.21	2.19	2.14	2.19
Attached no Children	2.59	2.51	2.49	2.46	2.50
Lone Parent	1.79	1.76	1.70	1.81	2.04
Female					
20-39					
Single	2.26	2.27	2.31	2.35	2.38
Attached with Children	2.27	2.26	2.30	2.32	2.34
Attached no Children	3.16	3.21	3.29	3.35	3.40
Lone Parent	1.53	1.53	1.52	1.56	1.61
Filing Child	3.08	3.05	3.05	3.08	3.10
40-64					
Single	2.53	2.51	2.52	2.55	2.58
Attached with Children	2.90	2.86	2.88	2.88	2.91
Attached no Children	3.50	3.45	3.48	3.50	3.48
Lone Parent	1.92	1.91	1.93	1.92	1.96
65+					
Single	1.88	1.84	1.82	1.85	1.87
Attached with Children	2.38	2.01	2.13	2.18	2.14
Attached no Children	2.82	2.76	2.74	2.82	2.82
Lone Parent	1.64	1.56	1.73	1.75	1.79

(continued)

Table A4b: **(cont.)**

	1992	1993	1994	1995	1996
Low Income					
Male					
20-39					
Single	0.57	0.60	0.59	0.58	0.56
Attached with Children	0.69	0.71	0.71	0.69	0.69
Attached no Children	0.62	0.66	0.65	0.65	0.63
Lone Parent	0.68	0.61	0.60	0.60	0.58
Filing Child	0.64	0.66	0.67	0.67	0.66
40-64					
Single	0.57	0.59	0.59	0.59	0.57
Attached with Children	0.66	0.67	0.67	0.66	0.65
Attached no Children	0.62	0.64	0.64	0.64	0.64
Lone Parent	0.62	0.60	0.63	0.59	0.57
65+					
Single	0.83	0.84	0.84	0.84	0.84
Attached with Children	0.75	0.75	0.74	0.74	0.75
Attached no Children	0.76	0.76	0.77	0.77	0.76
Lone Parent	0.68	0.74	0.72	0.74	0.72
Female					
20-39					
Single	0.59	0.62	0.61	0.61	0.60
Attached with Children	0.67	0.66	0.64	0.63	0.61
Attached no Children	0.62	0.67	0.66	0.65	0.61
Lone Parent	0.66	0.67	0.68	0.68	0.65
Filing Child	0.62	0.66	0.67	0.68	0.67
40-64					
Single	0.61	0.63	0.63	0.63	0.62
Attached with Children	0.63	0.62	0.60	0.58	0.56
Attached no Children	0.62	0.63	0.63	0.63	0.63
Lone Parent	0.66	0.65	0.65	0.63	0.61
65+					
Single	0.85	0.86	0.87	0.86	0.86
Attached with Children	0.70	0.73	0.74	0.74	0.72
Attached no Children	0.63	0.63	0.63	0.67	0.66
Lone Parent	0.73	0.70	0.71	0.72	0.72

Table A5a: **Annual Rates of Entering Low Income by Family Type and Age**

	1992/93	1993/94	1994/95	1995/96
Male				
20-39				
Single	6.2	5.9	6.6	6.6
Attached with Children	4.2	4.0	4.7	4.3
Attached no Children	3.1	3.2	3.5	3.2
Lone Parent	7.8	12.1	13.6	13.4
Filing Child	6.8	6.5	7.0	7.3
40-64				
Single	7.1	7.0	7.1	7.1
Attached with Children	3.2	3.1	3.3	3.2
Attached no Children	3.2	3.3	3.3	3.3
Lone Parent	5.9	8.3	8.7	8.6
65+				
Single	4.3	3.0	3.1	3.2
Attached with Children	5.1	5.5	5.3	6.6
Attached no Children	3.3	2.7	1.5	2.2
Lone Parent	14.3	10.0	14.3	12.9
Female				
20-39				
Single	5.4	5.3	5.4	5.1
Attached with Children	6.9	6.6	7.4	6.9
Attached no Children	4.0	3.9	3.7	3.7
Lone Parent	12.2	12.8	19.5	16.0
Filing Child	7.7	7.6	7.3	7.3
40-64				
Single	7.2	7.0	7.0	7.3
Attached with Children	4.0	4.1	4.5	4.4
Attached no Children	2.9	3.0	3.1	3.1
Lone Parent	8.1	8.3	10.1	10.4
65+				
Single	5.3	3.6	3.1	3.4
Attached with Children	4.0	6.3	9.6	6.9
Attached no Children	1.6	1.4	1.4	1.1
Lone Parent	13.0	20.0	19.3	13.6

Table A5b: **Annual Rates of Entering Low Income by Family Type Dynamics, Comparison of Status in Two Sequential Years**

First Year Family Type	Second Year Status			
	1992/93	1993/94	1994/95	1995/96
Male				
Single				
Single	-	*5.9*	*6.3*	*6.2*
Attached with Children	6.4	6.0	6.3	6.3
Attached no Children	-	3.4	3.2	3.4
Lone Parent	20.0	12.9	15.6	16.3
Attached with Children				
Single	11.6	12.3	12.3	-
Attached with Children	*3.6*	*3.4*	*3.8*	*3.5*
Attached no Children	2.4	2.7	2.6	-
Lone Parent	18.8	15.8	20.2	13.6
Attached no Children				
Single	11.8	11.8	12.7	8.1
Attached with Children	5.4	-	5.6	4.9
Attached no Children	*2.8*	-	*2.3*	*2.6*
Lone Parent	25.0	16.7	16.7	12.5
Lone Parent				
Single	-	6.7	5.8	-
Attached with Children	6.3	-	8.5	10.4
Attached no Children	-	-	-	-
Lone Parent	*8.8*	*10.0*	-	*11.1*
Filing Child				
Single	30.2	27.8	29.6	29.9
Attached with Children	19.8	14.1	18.3	20.0
Attached no Children	11.0	10.3	-	11.1
Lone Parent	40.0	40.0	-	40.0

(continued)

Table A5b: **(cont.)**

First Year Family Type	Second Year Status			
	1992/93	1993/94	1994/95	1995/96
Female				
Single				
Single	*-*	*5.0*	*4.7*	*4.8*
Attached with Children	7.7	6.9	5.3	5.8
Attached no Children	-	2.7	3.1	3.5
Lone Parent	32.6	28.8	29.2	29.5
Attached with Children				
Single	22.6	19.0	26.2	-
Attached with Children	*4.5*	*4.4*	*4.9*	*4.6*
Attached no Children	2.0	2.3	2.4	-
Lone Parent	46.9	45.8	48.4	46.6
Attached no Children				
Single	15.5	16.6	16.8	14.0
Attached with Children	6.2	-	4.9	5.1
Attached no Children	*1.9*	*-*	*1.9*	*2.1*
Lone Parent	53.1	48.4	47.1	42.9
Lone Parent				
Single	-	7.0	7.3	-
Attached with Children	5.2	-	6.1	7.2
Attached no Children	-	-	-	-
Lone Parent	*11.7*	*12.0*	*-*	*14.7*
Filing Child				
Single	32.2	31.3	31.1	31.1
Attached with Children	20.0	20.0	22.2	22.2
Attached no Children	8.6	8.6	-	8.4
Lone Parent	72.0	72.2	-	66.7

Table A6a: **Annual Rates of Exiting Low Income by Family Type and Age**

	1992/93	1993/94	1994/95	1995/96
Male				
20-39				
Single	33.9	32.7	29.8	27.9
Attached with Children	31.1	33.0	28.0	29.0
Attached no Children	40.3	38.7	36.4	33.7
Lone Parent	29.2	26.8	20.2	18.8
Filing Child	36.9	36.3	35.9	31.8
40-64				
Single	18.6	18.6	18.6	16.3
Attached with Children	32.7	32.2	29.6	29.5
Attached no Children	31.2	32.9	32.9	30.7
Lone Parent	29.4	26.0	23.6	20.9
65+				
Single	27.0	34.2	31.2	28.2
Attached with Children	36.0	33.3	31.3	29.4
Attached no Children	21.6	23.7	62.8	43.0
Lone Parent	25.0	25.0	28.6	30.0
Female				
20-39				
Single	35.5	32.6	30.8	30.3
Attached with Children	28.8	30.6	27.4	26.9
Attached no Children	42.7	41.0	39.0	37.6
Lone Parent	24.2	23.3	19.7	20.1
Filing Child	38.7	37.1	36.5	34.1
40-64				
Single	19.1	19.3	18.6	17.5
Attached with Children	33.0	34.1	33.0	31.4
Attached no Children	38.8	37.4	37.6	35.1
Lone Parent	24.3	23.6	21.2	20.8
65+				
Single	22.0	27.7	26.0	20.7
Attached with Children	33.3	33.3	28.6	28.6
Attached no Children	38.6	37.6	51.0	39.7
Lone Parent	30.8	28.6	28.6	26.9

Table A6b: **Annual Rates of Exiting Low Income by Family Type Dynamics**

	1992/93	1993/94	1994/95	1995/96
Male				
Single				
Single	*19.4*	*20.2*	*18.8*	*16.5*
Attached with Children	52.8	51.9	49.5	46.3
Attached no Children	62.5	65.8	64.4	61.6
Lone Parent	20.0	27.8	16.1	18.2
Attached with Children				
Single	39.9	36.0	35.2	34.0
Attached with Children	*30.8*	*32.0*	*28.0*	*28.8*
Attached no Children	47.8	46.5	39.6	36.9
Lone Parent	17.1	29.0	26.8	27.8
Attached no Children				
Single	41.8	42.9	45.5	43.6
Attached with Children	32.5	31.6	27.0	28.8
Attached no Children	*27.3*	*28.7*	*47.2*	*34.4*
Lone Parent	25.0	50.0	50.0	50.0
Lone Parent				
Single	45.3	37.2	35.1	31.5
Attached with Children	52.9	50.8	46.9	37.3
Attached no Children	55.6	60.0	75.0	80.0
Lone Parent	*20.7*	*20.3*	*15.6*	*15.5*
Filing Child				
Single	18.3	21.2	17.4	16.9
Attached with Children	26.3	31.3	28.6	25.0
Attached no Children	42.1	48.1	38.9	44.4
Lone Parent	0.0	0.0	0.0	50.0

(continued)

Table A6b: **(cont.)**

	1992/93	1993/94	1994/95	1995/96
Female				
Single				
Single	*18.7*	*20.7*	*19.4*	*16.5*
Attached with Children	63.9	63.5	69.1	61.5
Attached no Children	74.9	76.9	74.5	73.4
Lone Parent	8.9	14.2	14.3	11.9
Attached with Children				
Single	36.8	41.2	27.3	29.4
Attached with Children	*30.9*	*32.4*	*29.9*	*29.1*
Attached no Children	42.5	44.2	41.8	40.5
Lone Parent	13.3	14.8	11.8	12.0
Attached no Children				
Single	38.8	34.5	32.4	34.0
Attached with Children	38.9	33.6	32.9	31.5
Attached no Children	*40.1*	*38.8*	*40.5*	*36.1*
Lone Parent	17.2	7.7	14.3	0.0
Lone Parent				
Single	39.1	35.5	35.7	33.5
Attached with Children	66.1	67.6	66.0	62.8
Attached no Children	72.2	78.6	75.0	75.9
Lone Parent	*15.4*	*15.2*	*11.8*	*11.6*
Filing Child				
Single	20.7	15.7	15.8	18.8
Attached with Children	0.0	0.0	50.0	50.0
Attached no Children	60.0	59.1	58.8	50.0
Lone Parent	0.0	0.0	25.0	0.0

Table A7a: **Logit Model Results for the Probability of Entering Low Income**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Intercept	-2.687 **	-3.6995 **	-3.9737 **	-2.4645 **	-2.7883 **	-3.5194 **	-4.0647 **	-2.411 **
	(.023)	(.020)	0	(.080)	(.023)	(.017)	(.026)	(.031)
Family Dynamics								
to Single	N/A	1.1324 **	1.2841 **	-0.7385 **	N/A	1.915 **	2.1466 **	-0.488 **
		(.028)	0	(.088)		(.077)	(.022)	(.053)
to Attached with Children	0.0146	N/A	0.8364 **	-0.303 **	0.3064 **	N/A	0.994 **	-0.9962 **
	(.039)		0	(.089)	(.087)		(.032)	(.045)
to Attached no Children	-0.5005 **	-0.3454 **	N/A	-0.6244 *	-0.3905 **	-0.4546 **	N/A	-1.2392 **
	(.034)	(.034)		(.277)	(.039)	(.038)		(.267)
to Lone Parent	0.9781 **	1.4285 **	1.9337 **	N/A	1.9601 **	2.8899 **	3.8279 **	N/A
	(.053)	(.066)	0		(.046)	(.015)	(.092)	
to Filing Child	-1.3149 **	-0.2923	0.3236	-1.0661	-1.2988 **	—	0.8791 **	-0.7932
	(.084)	(.310)	(.155)	(.732)	(.127)		(.193)	(.590)
New Spouse	N/A	1.4413 **	1.2127 **	N/A	N/A	2.088 **	1.8997 **	N/A
		(.084)	0			(.058)	(.060)	
Number of Children (One)								
Two	N/A	-0.0504 **	N/A	0.0554	N/A	0.0168	N/A	0.0666 **
		(.014)		(.054)		(.012)		(.021)
Three	N/A	0.2326 **	N/A	0.1078	N/A	0.2456 **	N/A	0.3371 **
		(.017)		(.090)		(.014)		(.030)
Four	N/A	0.5188 **	N/A	0.0569	N/A	0.5363 **	N/A	0.6406 **
		(.025)		(.186)		(.022)		(.055)
Five or more	N/A	0.8768 **	N/A	0.4091	N/A	0.8599 **	N/A	0.86 **
		(.042)		(.398)		(.039)		(.104)
Minority Language (ENG/FR)								
English-Quebec	0.1168 **	0.358 **	-0.0162	0.6209 **	-0.0191	0.4164 **	0.0318	0.1945 **
	(.041)	(.032)	(.639)	(.163)	(.034)	(.028)	(.043)	(.068)
French-ROC	-0.2292 **	-0.2227 **	0.162 **	0.0549	-0.0399	-0.1503 **	0.1044	-0.0668
	(.070)	(.062)	(.009)	(.245)	(.062)	(.051)	(.077)	(.106)
Age Group (Prime)								
20-29	0.103 **	0.7398 **	-0.0374	0.7101 **	0.0251	0.7915 **	-0.0786 **	1.1437 **
	(.023)	(.019)	(.232)	(.108)	(.028)	(.015)	(.029)	(.028)
30-39	-0.022	0.2347 **	-0.0704 *	0.2711 **	-0.2428 **	0.2996 **	-0.1275 **	0.4209 **
	(.020)	(.013)	(.015)	(.056)	(.027)	(.012)	(.029)	(.022)
50-59	0.2079 **	0.2193 **	0.2589 **	-0.0084	0.2376 **	0.2185 **	0.2016 **	0.2519 **
	(.024)	(.021)	0	(.081)	(.023)	(.027)	(.022)	(.044)
60-69	-0.2053 **	0.7528 **	0.3401 **	0.7611 **	-0.1939 **	0.6187 **	-0.3755 **	0.9362 **
	(.026)	(.041)	0	(.136)	(.022)	(.088)	(.026)	(.099)
70+	-0.7615 **	0.5511 **	-0.0571 *	-0.2375	-0.4633 **	-0.0607	-1.0213 **	0.7869 **
	(.029)	(.107)	(.021)	(.301)	(.021)	(.199)	(.035)	(.123)

(continued)

Table A7a: (cont.)

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	0.5507 **	0.6334 **	0.7545 **	0.2087	0.4738 **	—	0.7443 **	-0.1631 *
	(.050)	(.030)	(.037)	(.177)	(.050)	(.017)	(.048)	(.080)
PEI	0.1291	-0.1605 *	0.2515 **	-0.1679	0.0678	-0.1892 **	0.0155	-0.4496 **
	(.095)	(.078)	(.003)	(.373)	(.096)	(.066)	(.112)	(.134)
NS	0.1958 **	0.1279 **	0.3518 **	0.2374	0.1632 **	0.00707	0.3356 **	-0.274 **
	(.039)	(.032)	0	(.125)	(.037)	(.027)	(.043)	(.059)
NB	0.1259 **	-0.0213	0.1734 **	-0.105	0.1751 **	-0.0804 **	0.2074 **	-0.528 **
	(.045)	(.037)	0	(.148)	(.042)	(.031)	(.049)	(.073)
QUE	0.0212	-0.028	0.3332 **	-0.4407 **	0.2403 **	-0.1805 **	0.2535 **	-0.6033 **
	(.019)	(.016)	0	(.066)	(.017)	(.013)	(.021)	(.028)
MAN	0.058	-0.0029	0.0315	-0.3609 *	-0.0163	-0.1023 **	0.0743	-0.501 **
	(.037)	(.029)	(.348)	(.145)	(.033)	(.025)	(.041)	(.056)
SASK	0.0775	0.1921 **	0.3369 **	-0.1254	0.2065 **	0.0295	0.3144 **	-0.6268 **
	(.041)	(.030)	0	(.141)	(.034)	(.026)	(.041)	(.065)
ALTA	-0.025	0.076 **	0.2073 **	-0.1937 *	0.1972 **	0.0313	0.231 **	-0.3694 **
	(.027)	(.020)	0	(.093)	(.024)	(.017)	(.028)	(.037)
BC	-0.0393	0.1367 **	0.2448 **	-0.008	0.1287 **	0.119 **	0.366 **	-0.2774 **
	(.023)	(.019)	0	(.081)	(.021)	(.016)	(.024)	(.031)
Mover	0.6352 **	0.6927 **	0.6057 **	0.9014 **	0.8488 **	0.785 **	0.621 **	1.1059 **
	(.051)	(.046)	0	(.194)	(.055)	(.037)	(.066)	(.080)
Area Size (500,000+)								
100,000-499,999	-0.1031 **	-0.2668 **	-0.2077 **	-0.1461	-0.0337	-0.1723 **	-0.1972 **	0.0511
	(.023)	(.019)	0	(.079)	(.020)	(.016)	(.026)	(.027)
30,000-99,999	0.0272	-0.054 **	0.0462 *	-0.0088	0.107 **	-0.0761 **	0.0241	0.1369 **
	(.024)	(.020)	(.029)	(.079)	(.021)	(.017)	(.027)	(.030)
15,000-29,999	-0.076	-0.149 **	0.0732	-0.323 *	0.1035 *	-0.0774 *	-0.036	0.2023 **
	(.046)	(.037)	(.067)	(.155)	(.043)	(.031)	(.051)	(.058)
0-14,999	0.1147 **	0.122 **	0.3682 **	-0.1314	0.2837 **	0.1295 **	0.2745 **	0.2487 **
	(.022)	(.017)	0	(.078)	(.020)	(.015)	(.023)	(.031)
Rural Area	0.3865 **	0.6043 **	0.6926 **	0.3633 **	0.5619 **	0.5153 **	0.6549 **	0.4972 **
	(.022)	(.017)	0	(.076)	(.023)	(.015)	(.024)	(.037)
Year (1992)								
1993	-0.0786 **	-0.061 **	-0.0573 **	0.2305 **	-0.1827 **	-0.0023	-0.0286	0.0536
	(.020)	(.016)	(.001)	(.072)	(.017)	(.014)	(.021)	(.028)
1994	-0.0128	0.069 **	-0.2177 **	0.3795 **	-0.2364 **	0.1168 **	-0.037	0.4672 **
	(.020)	(.015)	0	(.069)	(.017)	(.013)	(.021)	(.026)
1995	-0.0301	-0.0044	-0.1636 **	0.3678 **	-0.2042 **	0.0728 **	-0.016	0.3386 **
	(.020)	(.016)	0	(.070)	(.017)	(.014)	(.021)	(.026)
Log Likelihood	165,826	284,857	248,128	12,382	213,636	358,601	162,911	79,486
Sample Size	367,970	938,800	989,500	20,940	538,510	937,610	751,630	109,530

* Significance at the 95% level
** Significance at the 95% level
— The coefficient had to be suppressed to alleviate convergence problems.

Table A7b: **Logit Model Results for the Probability of Exiting Low Income**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Intercept	-1.455 **	-0.553 **	-0.961 **	-0.924 **	-1.382 **	-0.415 **	-0.385 **	-0.881 **
	(.025)	(.023)	(.032)	(.088)	(.026)	(.022)	(.035)	(.029)
Family Dynamics								
to Single	N/A	0.460 **	0.710 **	1.014 **	N/A	0.197	0.166 **	1.138 **
		(.041)	(.038)	(.081)		(.152)	(.042)	(.042)
to Attached with Children	1.279 **	N/A	-0.276 **	1.370 **	2.082 **	N/A	-0.243 **	2.546 **
	(.040)		(.043)	(.083)	(.066)		(.049)	(.023)
to Attached no Children	1.850 **	0.550 **	N/A	1.517 **	2.651 **	0.403 **	N/A	2.779 **
	(.032)	(.039)		(.265)	(.033)	(.043)		(.159)
to Lone Parent	0.079	-0.096	0.236	N/A	-0.608 **	-0.948 **	-1.468 **	N/A
	(.087)	(.107)	(.341)		(.073)	(.037)	(.222)	
to Filing Child	2.974 **	2.403 **	2.197 **	3.545 **	3.349 **	—	1.727 **	3.458 **
	(.041)	(.227)	(.193)	(.413)	(.061)		(.213)	(.381)
New Spouse	N/A	0.281 *	1.857 **	N/A	N/A	0.555 **	1.473 **	N/A
		(.130)	(.066)			(.071)	(.098)	
Number of Children (One)								
Two	N/A	0.058 **	N/A	0.112	N/A	0.044 **	N/A	-0.024
		(.017)		(.061)		(.015)		(.019)
Three	N/A	-0.011	N/A	0.139	N/A	-0.093 **	N/A	-0.198 **
		(.019)		(.091)		(.018)		(.026)
Four	N/A	-0.133 **	N/A	0.069	N/A	-0.267 **	N/A	-0.396 **
		(.026)		(.170)		(.025)		(.045)
Five or more	N/A	-0.410 **	N/A	-0.713 *	N/A	-0.487 **	N/A	-0.549 **
		(.044)		(.327)		(.042)		(.079)
Minority Language (ENG/FR)								
English-Quebec	0.108 *	-0.307 **	-0.030	-0.280	0.183 **	-0.305 **	-0.061	-0.129 *
	(.042)	(.035)	(.039)	(.172)	(.036)	(.033)	(.054)	(.057)
French-ROC	-0.234 **	0.104	-0.113	-0.245	-0.197 **	0.038	-0.193	-0.137
	(.070)	(.074)	(.073)	(.271)	(.059)	(.071)	(.106)	(.088)
Age Group (Prime)								
20-29	0.481 **	-0.076 **	0.359 **	-0.349 **	0.405 **	-0.292 **	0.252 **	-0.476 **
	(.023)	(.022)	(.040)	(.102)	(.028)	(.018)	(.040)	(.024)
30-39	0.223 **	-0.028	0.139 **	-0.172 **	0.155 **	-0.140 **	0.062	-0.188 **
	(.023)	(.015)	(.039)	(.061)	(.029)	(.015)	(.041)	(.022)
50-59	-0.239 **	-0.108 **	-0.012	-0.289 **	-0.128 **	-0.135 **	-0.091 **	-0.200 **
	(.027)	(.024)	(.031)	(.091)	(.026)	(.032)	(.031)	(.045)
60-69	0.471 **	-0.109 *	0.196 **	0.003	0.625 **	0.027	0.216 **	-0.110
	(.026)	(.044)	(.029)	(.141)	(.024)	(.088)	(.033)	(.087)
70+	0.550 **	-0.069	0.216 **	0.271	0.560 **	0.158	0.045	0.322 *
	(.032)	(.109)	(.029)	(.218)	(.023)	(.218)	(.043)	(.128)

(continued)

Table A7b: **(cont.)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	-0.884 **	-0.757 **	-0.629 **	-0.536 **	-1.292 **	-0.599 **	-0.823 **	-1.202 **
	(.054)	(.038)	(.044)	(.163)	(.051)	(.036)	(.064)	(.064)
PEI	-0.240 *	0.147	0.006	0.629	-0.930 **	0.089	-0.251	-0.430 **
	(.101)	(.093)	(.103)	(.328)	(.097)	(.088)	(.146)	(.111)
NS	-0.553 **	-0.406 **	-0.411 **	-0.473 **	-0.940 **	-0.387 **	-0.422 **	-1.015 **
	(.041)	(.039)	(.039)	(.136)	(.037)	(.037)	(.059)	(.046)
NB	-0.576 **	-0.475 **	-0.370 **	-0.417 **	-0.972 **	-0.442 **	-0.401 **	-0.953 **
	(.046)	(.043)	(.044)	(.157)	(.042)	(.041)	(.070)	(.051)
QUEB	-0.540 **	-0.247 **	-0.346 **	-0.387 **	-0.948 **	-0.279 **	-0.329 **	-0.913 **
	(.019)	(.018)	(.020)	(.071)	(.017)	(.017)	(.030)	(.023)
MAN	-0.576 **	-0.452 **	-0.228 **	-1.058 **	-0.587 **	-0.364 **	-0.041	-0.907 **
	(.037)	(.032)	(.037)	(.147)	(.035)	(.030)	(.054)	(.045)
SASK	-0.260 **	-0.279 **	-0.153 **	-0.522 **	-0.101 **	-0.258 **	-0.153 **	-0.902 **
	(.041)	(.031)	(.036)	(.143)	(.036)	(.030)	(.053)	(.048)
ALTA	0.102 **	-0.081 **	0.026	-0.094	0.141 **	-0.082 **	0.002	-0.537 **
	(.029)	(.024)	(.028)	(.100)	(.026)	(.022)	(.037)	(.032)
BC	-0.162 **	-0.005	-0.062 **	-0.300 **	-0.501 **	-0.035	-0.142 **	-0.297 **
	(.025)	(.023)	(.024)	(.091)	(.022)	(.020)	(.031)	(.027)
Mover	0.261 **	0.031	-0.055	0.061	-0.008	-0.119 *	0.000	-0.419 **
	(.055)	(.059)	(.078)	(.212)	(.063)	(.051)	(.095)	(.070)
Area Size (500,000+)								
100,000-499,999	0.011	0.079 **	0.123 **	0.025	0.111 **	0.117 **	0.214 **	0.062 *
	(.024)	(.024)	(.025)	(.088)	(.021)	(.021)	(.036)	(.026)
30,000-99,999	0.085 **	0.014	0.027	-0.077	0.061 **	0.098 **	0.205 **	0.016
	(.025)	(.024)	(.025)	(.087)	(.022)	(.022)	(.038)	(.027)
15,000-29,999	0.084	-0.022	0.049	-0.251	0.061	-0.049	0.134	0.038
	(.048)	(.043)	(.047)	(.168)	(.044)	(.040)	(.071)	(.049)
0-14,999	0.122 **	0.012	0.016	-0.088	0.055 **	0.013	0.075 *	-0.023
	(.023)	(.020)	(.021)	(.085)	(.021)	(.019)	(.032)	(.026)
Rural Area	0.030	-0.218 **	-0.131 **	-0.172 *	0.096 **	-0.267 **	0.013	-0.381 **
	(.023)	(.019)	(.021)	(.080)	(.023)	(.018)	(.032)	(.030)
Year (1992)								
1993	0.082 **	0.066 **	0.091 **	-0.035	0.145 **	0.059 **	-0.023	-0.024
	(.020)	(.018)	(.020)	(.073)	(.018)	(.017)	(.028)	(.023)
1994	0.009	-0.132 **	0.858 **	-0.322 **	0.078 **	-0.076 **	0.044	-0.273 **
	(.021)	(.019)	(.020)	(.076)	(.018)	(.017)	(.028)	(.024)
1995	-0.092 **	-0.093 **	0.365 **	-0.412 **	-0.086 **	-0.118 **	-0.104 **	-0.330 **
	(.021)	(.018)	(.021)	(.073)	(.019)	(.017)	(.029)	(.023)
Log Likelihood	120,507	137,585	114,662	8,967	150,250	160,998	55,042	95,114
Sample Size	125,760	113,620	92,110	9,080	161,470	135,850	41,900	115,540

* Significance at the 95% level
** Significance at the 95% level
— The coefficient had to be suppressed to alleviate convergence problems.

Table A8a: Hazard Model Results of the Probability of Exiting Low Income

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Intercept	-0.653 **	-0.049	-0.250 **	-0.480 **	-0.649 **	0.128 **	0.195 **	-0.325 **
	(.041)	(.036)	(.047)	(.140)	(.042)	(.034)	(.051)	(.051)
Family Dynamics								
to Single	N/A	0.465 **	0.467 **	0.745 **	N/A	-0.029	0.187 **	1.014 **
		(.060)	(.058)	(.119)		(.216)	(.065)	(.063)
to Attached with Children	1.213 **	N/A	-0.332 **	1.282 **	1.843 **	N/A	-0.218 **	2.487 **
	(.060)		(.060)	(.124)	(.102)		(.070)	(.039)
to Attached no Children	1.671 **	0.439 **	N/A	1.725 **	2.401 **	0.332 **	N/A	2.652 **
	(.049)	(.056)		(.394)	(.054)	(.060)		(.248)
to Lone Parent	-0.109	-0.061	-0.167	N/A	-0.971 **	-0.933 **	-1.549 **	N/A
	(.117)	(.147)	(.591)		(.119)	(.049)	(.319)	
to Filing Child	2.973 **	2.597 **	2.710 **	—	3.320 **	—	1.796 **	—
	(.072)	(.400)	(.356)		(.113)		(.345)	
New Spouse	N/A	0.192	1.442 **	N/A	N/A	0.394 **	1.212 **	N/A
		(.190)	(.113)			(.104)	(.172)	
Number of Children (One)								
Two	N/A	0.102 **	N/A	0.047	N/A	0.106 **	N/A	0.011
		(.023)		(.085)		(.021)		(.028)
Three	N/A	0.142 **	N/A	0.250	N/A	0.015	N/A	-0.087 *
		(.027)		(.136)		(.025)		(.039)
Four	N/A	0.105 **	N/A	0.520	N/A	-0.073 *	N/A	-0.192 **
		(.039)		(.262)		(.037)		(.074)
Five or more	N/A	-0.103	N/A	0.306	N/A	-0.137 *	N/A	-0.071
		(.070)		(.501)		(.066)		(.127)
Minority Language (ENG/FR)								
English-Quebec	-0.006	-0.191 **	0.122 *	-0.461	-0.023	-0.185 **	-0.169 *	-0.054
	(.062)	(.052)	(.057)	(.263)	(.055)	(.050)	(.075)	(.093)
French-ROC	-0.253 *	0.097	0.002	-0.575	-0.140	-0.014	-0.080	-0.122
	(.106)	(.106)	(.110)	(.368)	(.099)	(.099)	(.144)	(.135)
Age Group (Prime)								
20-29	0.184 **	-0.115 **	0.190 **	-0.268	0.097 *	-0.301 **	0.101	-0.527 **
	(.033)	(.030)	(.053)	(.146)	(.041)	(.025)	(.055)	(.037)
30-39	0.092 **	-0.071 **	0.030	-0.179 *	0.025	-0.169 **	0.003	-0.215 **
	(.031)	(.021)	(.052)	(.085)	(.042)	(.020)	(.055)	(.032)
50-59	-0.114 **	-0.061	-0.011	-0.057	-0.088 *	-0.016	-0.064	-0.081
	(.037)	(.034)	(.040)	(.127)	(.037)	(.045)	(.039)	(.068)
60-69	0.448 **	-0.092	0.241 **	0.477 *	0.646 **	0.298 *	0.314 **	0.128
	(.040)	(.064)	(.039)	(.219)	(.036)	(.134)	(.045)	(.139)
70+	0.698 **	-0.165	0.572 **	0.450	0.823 **	0.681	0.456 **	0.281
	(.047)	(.159)	(.042)	(.315)	(.034)	(.352)	(.068)	(.170)
Duration (One Year)								
Two Years	-0.553 **	-0.575 **	-0.534 **	-0.529 **	-0.583 **	-0.560 **	-0.604 **	-0.530 **
	(.026)	(.023)	(.025)	(.093)	(.025)	(.021)	(.038)	(.031)
Three Years	-0.834 **	-0.854 **	-0.655 **	-0.899 **	-0.917 **	-0.876 **	-0.870 **	-0.816 **
	(.039)	(.034)	(.037)	(.145)	(.037)	(.033)	(.055)	(.045)
Four Years	-0.895 **	-0.912 **	-0.887 **	-0.917 **	-1.093 **	-0.875 **	-1.125 **	-0.817 **
	(.068)	(.058)	(.070)	(.234)	(.069)	(.057)	(.101)	(.079)

(continued)

Table A8a: (cont.)

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	-0.710 **	-0.691 **	-0.633 **	-0.242	-0.738 **	-0.492 **	-0.904 **	-0.721 **
	(.079)	(.050)	(.062)	(.219)	(.079)	(.047)	(.084)	(.100)
PEI	-0.043	0.052	0.008	0.463	-0.277	0.159	-0.233	-0.222
	(.140)	(.124)	(.149)	(.463)	(.143)	(.115)	(.197)	(.166)
NS	-0.348 **	-0.204 **	-0.305 **	-0.339	-0.405 **	-0.149 **	-0.335 **	-0.586 **
	(.060)	(.052)	(.057)	(.192)	(.058)	(.051)	(.080)	(.072)
NB	-0.231 **	-0.283 **	-0.326 **	0.231	-0.533 **	-0.128 *	-0.148	-0.494 **
	(.066)	(.061)	(.065)	(.215)	(.067)	(.058)	(.098)	(.082)
QUEB	-0.203 **	-0.093 **	-0.216 **	0.073	-0.309 **	-0.044	-0.158 **	-0.317 **
	(.028)	(.025)	(.028)	(.099)	(.026)	(.024)	(.040)	(.034)
MAN	-0.176 **	-0.104 *	-0.086	-0.462 *	-0.241 **	0.003	0.094	-0.122
	(.055)	(.046)	(.054)	(.223)	(.052)	(.043)	(.074)	(.072)
SASK	0.029	0.007	0.004	0.175	0.060	0.035	0.024	-0.102
	(.061)	(.047)	(.052)	(.199)	(.056)	(.044)	(.073)	(.077)
ALTA	0.247 **	0.019	0.031	0.292 *	0.266 **	0.058	-0.016	-0.049
	(.041)	(.032)	(.039)	(.139)	(.038)	(.030)	(.050)	(.047)
BC	0.009	0.044	-0.058	0.053	-0.153 **	0.051	-0.158 **	0.082 *
	(.036)	(.031)	(.034)	(.128)	(.033)	(.027)	(.042)	(.040)
Mover	0.080	-0.070	-0.035	-0.169	-0.012	-0.212 **	0.209	-0.604 **
	(.079)	(.082)	(.111)	(.308)	(.093)	(.069)	(.133)	(.105)
Area Size (500,000+)								
100,000-499,999	-0.041	0.107 **	0.138 **	-0.093	0.030	0.115 **	0.157 **	0.051
	(.035)	(.032)	(.036)	(.120)	(.032)	(.029)	(.048)	(.038)
30,000-99,999	0.003	0.104 **	-0.021	-0.086	-0.033	0.116 **	0.087	0.001
	(.036)	(.032)	(.035)	(.120)	(.033)	(.030)	(.050)	(.040)
15,000-29,999	0.036	0.082	0.045	-0.144	-0.089	0.027	0.009	0.062
	(.070)	(.059)	(.066)	(.227)	(.067)	(.056)	(.094)	(.074)
0-14,999	0.019	0.060 *	0.001	-0.184	-0.062 *	0.027	0.021	-0.040
	(.034)	(.028)	(.031)	(.118)	(.031)	(.026)	(.042)	(.039)
Rural Area	-0.054	-0.064 *	-0.136 **	-0.049	-0.075 *	-0.057 *	-0.052	-0.163 **
	(.034)	(.027)	(.031)	(.120)	(.036)	(.026)	(.043)	(.047)
Year (1992)								
1993	0.118 **	0.080 **	0.020	0.194	0.097 **	-0.011	0.053	-0.116 **
	(.036)	(.031)	(.034)	(.125)	(.035)	(.029)	(.045)	(.045)
1994	0.066	-0.102 **	0.459 **	-0.168	0.139 **	-0.110 **	0.065	-0.286 **
	(.036)	(.031)	(.034)	(.126)	(.035)	(.029)	(.045)	(.045)
1995	-0.081 *	-0.094 **	0.142 **	-0.291 *	-0.063	-0.180 **	-0.113 *	-0.452 **
	(.036)	(.030)	(.035)	(.122)	(.035)	(.029)	(.045)	(.044)
Log Likelihood	53,142	69,370	55,105	4,372	60,739	81,463	29,880	39,966
Sample Size	45,620	52,730	41,470	3,700	51,580	62,010	22,460	38,380

* Significance at the 95% level
** Significance at the 95% level
— The coefficient had to be suppressed to alleviate convergence problems.

Table A8b: **Hazard Model Results for the Probability of Re-Entering Low Income**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Intercept	-1.014 **	-1.369 **	-1.272 **	-0.568 **	-1.110 **	-1.479 **	-1.634 **	-0.953 **
	(.049)	(.042)	(.055)	(.163)	(.049)	(.038)	(.061)	(.056)
Family Dynamics								
to Single	N/A	0.603 **	0.456 **	-0.154	N/A	1.410 **	1.750 **	-0.492 **
		(.067)	(.062)	(.180)		(.233)	(.065)	(.099)
to Attached with Children	-0.039	N/A	0.749 **	-0.351	-0.283	N/A	0.772 **	-1.196 **
	(.083)		(.064)	(.189)	(.215)		(.076)	(.076)
to Attached no Children	-0.533 **	-0.219 **	N/A	—	-0.717 **	-0.266 **	N/A	-0.920 *
	(.071)	(.073)			(.085)	(.076)		(.445)
to Lone Parent	0.858 **	0.890 **	-0.408	N/A	1.455 **	2.462 **	2.759 **	N/A
	(.113)	(.160)	(1.003)		(.110)	(.049)	(.289)	
to Filing Child	-1.524 **	-0.566	-0.151	-0.606	-1.601 **	—	0.383	-0.862
	(.162)	(.558)	(.535)	(1.188)	(.277)		(.487)	(1.141)
New Spouse	N/A	1.493 **	1.040 **	N/A	N/A	1.362 **	1.361 **	N/A
		(.181)	(.066)			(.126)	(.100)	
Number of Children (One)								
Two	N/A	-0.010	N/A	0.059	N/A	0.051 *	N/A	-0.001
		(.030)		(.112)		(.026)		(.037)
Three	N/A	0.043	N/A	0.225	N/A	0.176 **	N/A	0.057
		(.034)		(.177)		(.030)		(.052)
Four	N/A	0.131 **	N/A	0.064	N/A	0.322 **	N/A	0.327 **
		(.048)		(.341)		(.043)		(.091)
Five or more	N/A	0.407 **	N/A	1.002	N/A	0.436 **	N/A	0.210
		(.077)		(.692)		(.074)		(.159)
Minority Language (ENG/FR)								
English-Quebec	0.143	0.213 **	0.173 *	0.962 **	0.078	0.192 **	0.012	0.047
	(.085)	(.064)	(.071)	(.360)	(.070)	(.058)	(.101)	(.126)
French-ROC	-0.115	0.103	-0.031	-0.159	-0.222	0.283 *	-0.102	-0.192
	(.143)	(.132)	(.137)	(.547)	(.127)	(.111)	(.181)	(.173)
Age Group (40-49)								
20-29	-0.366 **	0.102 *	-0.613 **	0.101	-0.532 **	0.060 *	-0.767 **	0.496 **
	(.046)	(.040)	(.069)	(.221)	(.058)	(.031)	(.066)	(.049)
30-39	-0.126 **	0.041	-0.197 **	-0.055	-0.258 **	-0.003	-0.300 **	0.173 **
	(.043)	(.027)	(.064)	(.116)	(.056)	(.025)	(.066)	(.041)
50-59	0.266 **	0.130 **	0.224 **	-0.091	0.168 **	0.096	0.152 **	0.263 **
	(.051)	(.043)	(.052)	(.165)	(.049)	(.056)	(.050)	(.083)
60-69	-0.515 **	0.108	-0.113 *	0.319	-0.622 **	-0.110	-0.572 **	0.555 **
	(.050)	(.081)	(.050)	(.279)	(.046)	(.161)	(.058)	(.169)
70+	-0.569 **	-0.079	-0.684 **	-1.009	-0.514 **	-0.026	-0.750 **	0.460 *
	(.056)	(.185)	(.053)	(.558)	(.043)	(.441)	(.083)	(.203)
Duration (One Year)								
Two Years	-0.607 **	-0.587 **	-0.583 **	-0.342 **	-0.668 **	-0.601 **	-0.590 **	-0.503 **
	(.035)	(.029)	(.035)	(.124)	(.032)	(.026)	(.044)	(.041)
Three Years	-0.854 **	-0.967 **	-0.922 **	-0.592 **	-1.064 **	-0.910 **	-0.946 **	-0.677 **
	(.056)	(.047)	(.055)	(.192)	(.052)	(.040)	(.066)	(.067)

(continued)

Table A8b: **(cont.)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	0.216 *	0.397 **	0.356 **	0.691	0.535 **	0.328 **	0.307 **	-0.014
	(.101)	(.071)	(.085)	(.374)	(.099)	(.063)	(.115)	(.149)
PEI	-0.119	-0.087	0.417 *	-0.534	0.524 *	-0.134	-0.090	-0.650 **
	(.204)	(.159)	(.172)	(.658)	(.208)	(.156)	(.259)	(.231)
NS	0.268 **	0.141 *	0.339 **	0.504 *	0.376 **	0.099	0.109	-0.288 **
	(.078)	(.071)	(.070)	(.253)	(.076)	(.062)	(.104)	(.104)
NB	0.075	0.055	0.165 *	-0.073	0.444 **	-0.028	0.227 *	-0.465 **
	(.092)	(.082)	(.083)	(.321)	(.085)	(.069)	(.113)	(.123)
QUEB	0.011	0.054	0.156 **	-0.265	0.364 **	0.062 *	0.143 **	-0.515 **
	(.038)	(.033)	(.037)	(.137)	(.034)	(.029)	(.050)	(.050)
MAN	0.105	0.106	0.138	-0.490	0.184 **	0.039	0.198 *	-0.567 **
	(.071)	(.057)	(.071)	(.314)	(.069)	(.052)	(.092)	(.099)
SASK	0.024	0.027	0.175 **	0.175	0.138 *	0.136 **	0.277 **	-0.461 **
	(.076)	(.057)	(.064)	(.269)	(.066)	(.051)	(.089)	(.105)
ALTA	-0.131 *	-0.008	-0.067	-0.221	-0.138 **	0.059	0.171 **	-0.404 **
	(.054)	(.043)	(.053)	(.188)	(.052)	(.037)	(.064)	(.067)
BC	0.037	0.064	0.070	0.085	0.291 **	0.048	0.134 *	-0.477 **
	(.047)	(.041)	(.044)	(.169)	(.042)	(.034)	(.056)	(.053)
Mover	0.389 **	0.505 **	0.091	0.509	0.695 **	0.548 **	0.491 **	0.898 **
	(.109)	(.112)	(.149)	(.443)	(.122)	(.086)	(.161)	(.153)
Area Size (500,000+)								
100,000-499,999	-0.028	-0.082	-0.028	-0.364 *	0.019	-0.051	-0.190 **	0.039
	(.047)	(.042)	(.047)	(.164)	(.041)	(.036)	(.064)	(.050)
30,000-99,999	0.043	0.060	-0.007	-0.094	0.006	-0.030	-0.072	0.120 *
	(.049)	(.043)	(.048)	(.160)	(.044)	(.037)	(.064)	(.053)
15,000-29,999	-0.053	0.051	0.065	-0.140	0.128	0.079	0.031	0.231 *
	(.089)	(.078)	(.089)	(.314)	(.085)	(.065)	(.120)	(.099)
0-14,999	0.068	0.078 *	0.135 **	-0.344 *	0.069	0.053	0.018	0.167 **
	(.044)	(.036)	(.040)	(.166)	(.041)	(.032)	(.054)	(.053)
Rural Area	0.217 **	0.248 **	0.223 **	0.029	0.184 **	0.240 **	0.267 **	0.377 **
	(.045)	(.034)	(.040)	(.157)	(.046)	(.031)	(.053)	(.064)
Year (1993)								
1994	0.161 **	0.144 **	-0.247 **	0.008	0.093 *	0.182 **	0.114 *	0.547 **
	(.040)	(.033)	(.039)	(.143)	(.037)	(.029)	(.051)	(.047)
1995	0.164 **	0.093 **	-0.186 **	0.060	0.193 **	0.130 **	0.178 **	0.413 **
	(.041)	(.034)	(.037)	(.150)	(.037)	(.030)	(.051)	(.049)
Log Likelihood	31,562	45,835	37,318	2,369	38,783	59,853	21,485	21,467
Sample Size	31,750	46,060	44,140	2,000	41,700	61,260	27,150	18,140

* Significance at the 95% level

** Significance at the 95% level

-- The coefficient had to be suppressed to alleviate convergence problems.

Table A8c: **Probability Effects for the Hazard Exit Models (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	34.22 **	48.78	43.79 **	38.22 **	34.33 **	53.20 **	54.85 **	41.96 **
Family Dynamics								
to Single	N/A	11.48 **	11.62 **	18.36 **	N/A	-0.72	4.57 **	24.62 **
to Attached with Children	29.42 **	N/A	-7.93 **	30.82 **	42.42 **	N/A	-5.44 **	47.72
to Attached no Children	39.23 **	10.86 **	N/A	39.42 **	50.90 **	8.09 **	N/A	49.16 **
to Lone Parent	-2.41	-1.51	-4.07	N/A	-17.81 **	-22.29 **	-34.33 **	N/A
to Filing Child	56.82 **	43.97 **	48.34 **	—	59.20 **	—	33.13 **	—
New Spouse	N/A	4.79	32.92 **	N/A	N/A	9.56 **	25.47 **	N/A
Number of Children (One)								
Two	N/A	2.55 **	N/A	1.11	N/A	2.62 **	N/A	0.28
Three	N/A	3.56 **	N/A	6.06	N/A	0.36	N/A	-2.11 *
Four	N/A	2.61 **	N/A	12.77	N/A	-1.83 *	N/A	-4.58 **
Five or more	N/A	-2.57	N/A	7.45	N/A	-3.42 *	N/A	-1.71
Minority Language (ENG/FR)								
English-Quebec	-0.14	-4.75 **	3.03 *	-10.16	-0.51	-4.62 **	-4.72 *	-1.30
French-ROC	-5.44 *	2.41	0.04	-12.39	-3.09	-0.35	-2.00	-2.93
Age Group (40-49)								
20-29	4.25 **	-2.86 **	4.73 **	-8.09	2.22 *	-7.51 **	2.49	-12.04 **
30-39	2.10 **	-1.78 **	0.74	-4.14 *	0.57	-4.22 **	0.06	-5.14 **
50-59	-2.52 **	-1.52	-0.28	-1.33	-1.95 *	-0.39	-1.59	-1.97
60-69	10.67 **	-2.30	5.99 **	11.69 *	15.59	7.29 *	7.59 **	3.15
70+	18.90 **	-4.10	14.20 **	11.03	20.02	15.99	10.85 **	6.95
Duration (One Year)								
Two Years	-11.20 **	-13.69 **	-12.43 **	-11.50 **	-11.73 **	-13.84 **	-14.94 **	-12.10 **
Three Years	-15.79 **	-19.93 **	-14.99 **	-18.11 **	-17.05 **	-21.07 **	-21.12 **	-17.74 **
Four Years	-16.70 **	-21.10 **	-19.50 **	-18.40 **	-19.42 **	-21.05 **	-26.57 **	-17.76 **

(continued)

Table A8c: **(cont.)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	-13.85 **	-16.47 **	-14.52 **	-5.52	-14.34 **	-12.19 **	-21.88 **	-15.95 **
PEI	-0.96	1.29	0.19	11.34	-5.96	3.94	-5.81	-5.28
NS	-7.36 **	-5.08 **	-7.31 **	-7.63	-8.47 **	-3.72 **	-8.34 **	-13.26 **
NB	-5.00 **	-7.00 **	-7.80 **	5.58	-10.84 **	-3.18 *	-3.69	-11.35 **
QUEB	-4.40 **	-2.32 **	-5.23 **	1.73	-6.60 **	-1.08	-3.94 **	-7.46 **
MAN	-3.85 **	-2.60	-2.10	-10.18 *	-5.21 **	0.08	2.32	-2.94
SASK	0.66	0.17	0.11	4.20	1.36	0.88	0.59	-2.46
ALTA	5.75 **	0.46	0.76	7.09 *	6.22 **	1.44	-0.38	-1.19
BC	0.20	1.09	-1.41	1.25	-3.37 **	1.28	-3.94 **	2.00 *
Mobility								
Mover	1.81	-1.75	-0.86	-3.90	-0.27	-5.29 **	5.10	-13.64 **
Area Size (500,000+)								
100,000-499,999	-0.91	2.68 **	3.42 **	-2.18	0.68	2.86 **	3.86 **	1.23
30,000-99,999	0.06	2.59 ***	-0.53	-2.00	-0.74	2.87 **	2.15	0.01
15,000-29,999	0.81	2.06	1.12	-3.34	-1.97	0.66	0.22	1.52
0-14,999	0.43	1.51 *	0.02	-4.24	-1.39 *	0.66	0.52	-0.96
Rural Area	-1.20	-1.60 *	-3.31 **	-1.15	-1.68 *	-1.42 *	-1.28	-3.91 **
Year (1992)								
1993	2.71 **	2.00 **	0.49	4.68	2.21 **	-0.28	1.32	-2.80 **
1994	1.50	-2.54 **	11.43 **	-3.88	3.20 **	-2.74 **	1.61	-6.75 **
1995	-1.81 *	-2.35 **	3.53 **	-6.59 *	-1.41	-4.49 **	-2.81 *	-10.46 **

Table A8d: **Probability Effects for the Hazard Re-Entry Models (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	26.61 **	20.28 **	21.89 **	36.17 **	24.79 **	18.56 **	16.33 **	27.83 **
Family Dynamics								
to Single	N/A	11.45 **	8.76 **	-3.48	N/A	29.72 **	36.57 **	-8.75 **
to Attached with Children	-0.75	N/A	15.33 **	-7.65	-4.90	N/A	13.36 **	-17.38 **
to Attached no Children	-9.07 **	-3.31 **	N/A	—	-10.92 **	-3.68 **	N/A	-14.51 *
to Lone Parent	19.49 **	17.97 **	-6.18	N/A	33.75 **	54.22 **	59.17 **	N/A
to Filing Child	-19.29 **	-7.66	-2.47	-12.55	-18.56 **	—	5.92	-13.83
New Spouse	N/A	32.82 **	22.34 **	N/A	N/A	28.53 **	26.88 **	N/A
Number of Children (One)								
Two	N/A	-0.16	N/A	1.36	N/A	0.78 *	N/A	-0.01
Three	N/A	0.70	N/A	5.35	N/A	2.80 **	N/A	1.17
Four	N/A	2.21 **	N/A	1.48	N/A	5.36 **	N/A	7.02 **
Five or more	N/A	7.37 **	N/A	24.51	N/A	7.49 **	N/A	4.40
Minority Language (ENG/FR)								
English-Quebec	2.87	3.66 **	3.09 *	23.56 **	1.49	3.08 **	0.17	0.94
French-ROC	-2.18	1.72	-0.53	-3.59	-3.90	4.65 *	-1.35	-3.68
Age Group (40-49)								
20-29	-6.52 **	1.69 *	-8.71 **	2.36	-8.57 **	0.92 *	-8.02 **	10.94 **
30-39	-2.39 **	0.66	-3.19 **	-1.26	-4.50 **	-0.04	-3.70 **	3.60 **
50-59	5.50 **	2.18 **	4.07 **	-2.08	3.27 **	1.50	2.18 **	5.57 **
60-69	-8.80 **	1.80	-1.87 *	7.63	-9.75 **	-1.61	-6.40 **	12.34 **
70+	-9.58 **	-1.24	-9.50 **	-19.05	-8.33 **	-0.39	-7.89 **	10.09 *
Duration (One Year)								
Two Years	-10.11 **	-7.88 **	-6.36 **	-7.47 **	-10.33 **	-7.45 **	-6.57 **	-8.92 **
Three Years	-13.24 **	-11.46 **	-11.86 **	-12.30 **	-14.58 **	-10.16 **	-9.28 **	-11.45 **

(continued)

Table A8d: **(cont.)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	4.42 *	7.16 **	6.69 **	16.89	11.23 **	5.48 **	4.63 **	-0.28
PEI	-2.26	-1.38	7.95 *	-11.24 *	10.98 *	-1.94	-1.19	-11.07 **
NS	5.55 **	2.37 *	6.34 **	12.24	7.64 **	1.54	1.54	-5.39 **
NB	1.48	0.90	2.95 *	-1.66	9.14 **	-0.42	3.34 *	-8.33 **
QUEB	0.21	0.89	2.77 **	-5.86	7.38 **	0.96 *	2.06 **	-9.11 **
MAN	2.11	1.76	2.46	-10.39	3.59 **	0.59	2.89 *	-9.88 **
SASK	0.46	0.44	3.13 **	4.12	2.67 *	2.17 **	4.14 **	-8.27 **
ALTA	-2.47 *	-0.13	-1.45	-4.93	-2.48 **	0.91	2.47 **	-7.35 **
BC	0.73	1.06	1.21	1.98	5.81 **	0.74	1.92 *	-8.52 **
Mover	8.24 **	9.37 **	1.60	12.36	14.97 **	9.70 **	7.84 **	20.80 **
Area Size (500,000+)								
100,000-499,999	-0.55	-1.29	-0.47	-7.92 *	0.36	-0.75	-2.44 **	0.79
30,000-99,999	0.85	0.98	-0.11	-2.14	0.11	-0.44	-0.95	2.46 *
15,000-29,999	-1.01	0.83	1.13	-3.15	2.46	1.22	0.42	4.86 *
0-14,999	1.34	1.30 *	2.39 **	-7.51 *	1.31	0.82	0.25	3.47 **
Rural Area	4.45 **	4.31 **	4.05 **	0.66	3.60 **	3.91 **	3.99 **	8.16 **
Year (1992)								
1994	3.26 **	2.43 **	-3.93 **	0.20	1.78 *	2.91 **	1.62 *	12.17 **
1995	3.33 **	1.55 **	-3.02 **	1.39	3.78 **	2.04 **	2.58 **	8.99 **

* Significance at the 95% level

** Significance at the 95% level

— The coefficient had to be suppressed to alleviate convergence problems.

Table A9a: **Logit Model Results for the Probability of Entering Low Income, 1995-96**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Intercept	-3.150 **	-4.024 **	-4.282 **	-2.442 **	-3.303 **	-3.733 **	-4.282 **	-2.300 **
	(.041)	(.036)	(.046)	(.134)	(.042)	(.031)	(.046)	(.051)
Family Dynamics								
to Single	N/A	1.124 **	0.618 **	-0.745 **	N/A	1.812 **	1.833 **	-0.502 **
		(.058)	(.054)	(.198)		(.167)	(.050)	(.101)
to Attached with Children	-0.124	N/A	0.626 **	-0.208	-0.250	N/A	0.815 **	-1.168 **
	(.079)		(.070)	(.175)	(.264)		(.076)	(.087)
to Attached no Children	-0.675 **	-0.275 **	N/A	-0.901	-0.548 **	-0.218 **	N/A	-1.136 **
	(.071)	(.070)		(.738)	(.080)	(.067)		(.422)
to Lone Parent	0.922 **	0.919 **	1.061 *	N/A	1.872 **	2.944 **	3.333 **	N/A
	(.101)	(.145)	(.507)		(.117)	(.033)	(.240)	
to Filing Child	-1.302 **	-0.093	-0.215	—	-1.049 **	—	-0.977	—
	(.178)	(.570)	(.797)		(.268)		(.993)	
New Spouse	N/A	1.275 **	0.777 **	N/A	N/A	1.954 **	1.371 **	N/A
		(.176)	(.086)			(.120)	(.122)	
Number of Children (One)								
Two	N/A	-0.105 **	N/A	-0.043	N/A	0.015	N/A	-0.098 *
		(.029)		(.113)		(.025)		(.044)
Three	N/A	0.038	N/A	0.070	N/A	0.122 **	N/A	0.249 **
		(.035)		(.176)		(.030)		(.060)
Four	N/A	0.097	N/A	-0.512	N/A	0.269 **	N/A	0.699 **
		(.053)		(.398)		(.045)		(.104)
Five or more	N/A	0.295 **	N/A	0.359	N/A	0.423 **	N/A	0.753 **
		(.091)		(.742)		(.084)		(.190)
Minority Language (ENG/FR)								
English-Quebec	0.062	0.226 **	0.009	0.375	0.072	0.338 **	-0.034	0.239
	(.089)	(.069)	(.071)	(.357)	(.072)	(.059)	(.093)	(.134)
French-ROC	-0.204	-0.070	0.247 *	0.031	-0.108	-0.061	0.163	-0.421
	(.145)	(.125)	(.116)	(.552)	(.131)	(.105)	(.147)	(.235)
Age Group (40-49)								
20-29	-0.122 *	0.370 **	-0.360 **	0.064	-0.344 **	0.425 **	-0.476 **	0.608 **
	(.050)	(.045)	(.073)	(.289)	(.066)	(.032)	(.067)	(.064)
30-39	-0.037	0.215 **	-0.129 *	0.248 *	-0.352 **	0.229 **	-0.165 **	0.266 **
	(.041)	(.027)	(.060)	(.115)	(.056)	(.023)	(.058)	(.044)
50-59	0.201 **	0.142 **	0.251 **	-0.093	0.170 **	0.120 *	0.136 **	0.118
	(.047)	(.042)	(.045)	(.164)	(.046)	(.052)	(.042)	(.087)
60-69	-0.466 **	0.377 **	0.043	0.621 *	-0.611 **	-0.065	-0.571 **	0.662 **
	(.052)	(.088)	(.044)	(.275)	(.047)	(.187)	(.051)	(.196)
70+	-0.863 **	0.121	-0.880 **	-0.639	-0.661 **	-0.205	-1.290 **	0.356
	(.056)	(.200)	(.051)	(.526)	(.042)	(.376)	(.074)	(.216)
Years Low-Income (92-94)								
One	1.563 **	1.878 **	1.960 **	1.439 **	1.639 **	1.556 **	1.895 **	1.156 **
	(.037)	(.031)	(.035)	(.127)	(.034)	(.027)	(.042)	(.048)
Two	2.016 **	2.475 **	2.448 **	1.897 **	2.256 **	2.062 **	2.465 **	1.660 **
	(.044)	(.037)	(.040)	(.159)	(.039)	(.032)	(.053)	(.057)
Three	2.574 **	3.046 **	2.870 **	2.341 **	2.837 **	2.559 **	2.930 **	2.173 **
	(.049)	(.045)	(.042)	(.199)	(.045)	(.039)	(.066)	(.067)

(continued)

Table A9a: **(cont.)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	0.317 **	0.444 **	0.587 **	0.061	0.235 *	0.225 **	0.471 **	-0.406 *
	(.110)	(.070)	(.077)	(.423)	(.112)	(.062)	(.103)	(.176)
PEI	0.110	-0.078	0.313	-0.701	-0.001	0.006	-0.306	-0.965 **
	(.196)	(.160)	(.172)	(.769)	(.215)	(.133)	(.254)	(.305)
NS	0.209 **	0.212 **	0.445 **	0.492	0.011	0.078	0.252 **	-0.564 **
	(.080)	(.066)	(.065)	(.252)	(.082)	(.056)	(.089)	(.122)
NB	0.152	0.157 *	0.361 **	-0.064	0.202 *	0.018	0.231 *	-0.834 **
	(.091)	(.074)	(.073)	(.315)	(.087)	(.063)	(.096)	(.156)
QUEB	-0.022	-0.057	0.258 **	-0.420 **	0.163 **	-0.229 **	0.208 **	-0.751 **
	(.038)	(.032)	(.034)	(.134)	(.035)	(.028)	(.044)	(.056)
MAN	0.038	-0.071	0.045	-0.489	0.102	-0.125 *	0.091	-0.777 **
	(.075)	(.061)	(.065)	(.299)	(.067)	(.052)	(.082)	(.117)
SASK	0.012	0.072	0.189 **	-0.327	0.087	-0.108 *	0.301 **	-0.992 **
	(.082)	(.061)	(.066)	(.296)	(.071)	(.055)	(.080)	(.137)
ALTA	-0.110	-0.025	0.116 *	-0.329	-0.171 **	-0.028	0.195 **	-0.587 **
	(.056)	(.043)	(.049)	(.192)	(.054)	(.036)	(.057)	(.076)
BC	0.008	0.015	0.232 **	-0.088	0.082	-0.040	0.288 **	-0.658 **
	(.047)	(.041)	(.041)	(.172)	(.043)	(.034)	(.049)	(.064)
Mover	0.588 **	0.673 **	0.429 **	0.518	0.880 **	0.980 **	0.699 **	1.044 **
	(.110)	(.103)	(.137)	(.440)	(.122)	(.076)	(.140)	(.174)
Area Size (500,000+)								
100,000-499,999	-0.024	-0.118 **	-0.212 **	-0.266	0.034	-0.098 **	-0.131 *	0.027
	(.047)	(.040)	(.044)	(.163)	(.041)	(.033)	(.053)	(.058)
30,000-99,999	0.059	-0.035	-0.006	-0.078	0.073	-0.035	-0.022	0.145 *
	(.049)	(.042)	(.044)	(.162)	(.045)	(.035)	(.056)	(.062)
15,000-29,999	-0.070	-0.147	0.061	0.065	0.037	-0.074	0.010	0.280 *
	(.092)	(.081)	(.081)	(.285)	(.092)	(.066)	(.105)	(.120)
0-14,999	0.086	0.129 **	0.262 **	-0.159	0.176 **	0.083 **	0.256 **	0.219 **
	(.045)	(.036)	(.037)	(.163)	(.043)	(.031)	(.047)	(.063)
Rural Area	0.246 **	0.435 **	0.469 **	0.187	0.319 **	0.380 **	0.583 **	0.428 **
	(.047)	(.036)	(.038)	(.158)	(.049)	(.031)	(.048)	(.077)
Log Likl.	38,067	61,369	56,284	2,829	46,885	80,703	34,420	18,348
Sample Size	95,590	230,410	253,040	4,870	140,460	229,760	190,160	27,170

* Significance at the 95% level
** Significance at the 95% level
— The coefficient had to be suppressed to alleviate convergence problems.

Table A9b: **Logit Model Results for the Probability of Being Poor, 1996**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Intercept	-2.883 **	-3.987 **	-4.177 **	-2.447 **	-3.228 **	-3.493 **	-4.218 **	-2.127 **
	(.029)	(.028)	(.036)	(.098)	(.031)	(.024)	(.037)	(.034)
Number of Children (One)								
Two	N/A	-0.047 *	N/A	-0.164 *	N/A	-0.064 **	N/A	0.101 **
		(.021)		(.076)		(.018)		(.026)
Three	N/A	0.018	N/A	-0.287 *	N/A	-0.004	N/A	0.391 **
		(.025)		(.127)		(.022)		(.038)
Four	N/A	0.101 **	N/A	-0.358	N/A	0.120 **	N/A	0.716 **
		(.037)		(.228)		(.033)		(.073)
Five or more	N/A	0.284 **	N/A	0.177	N/A	0.304 **	N/A	1.068 **
		(.066)		(.507)		(.059)		(.150)
Minority Language (ENG/FR)								
English-Quebec	0.071	0.271 **	0.024	0.311	0.012	0.170 **	0.238 **	-0.088
	(.056)	(.048)	(.052)	(.244)	(.049)	(.044)	(.066)	(.080)
French-ROC	0.137	-0.033	0.076	0.099	-0.002	-0.121	0.146	-0.011
	(.088)	(.090)	(.091)	(.344)	(.082)	(.082)	(.115)	(.128)
Age Group (40-49)								
20-29	-0.151 **	0.322 **	-0.222 **	0.531 **	0.049	0.098 **	-0.558 **	0.951 **
	(.034)	(.033)	(.053)	(.179)	(.044)	(.024)	(.053)	(.039)
30-39	-0.081 **	0.189 **	-0.084	0.375 **	-0.108 **	0.121 **	-0.126 **	0.476 **
	(.028)	(.019)	(.045)	(.080)	(.038)	(.017)	(.046)	(.027)
50-59	0.180 **	0.061 *	0.253 **	-0.032	0.199 **	0.082 *	0.218 **	0.002
	(.031)	(.030)	(.034)	(.101)	(.032)	(.036)	(.033)	(.052)
60-69	-0.717 **	0.118	0.058	-0.060	-0.752 **	0.024	-0.298 **	0.187
	(.033)	(.062)	(.033)	(.187)	(.032)	(.117)	(.037)	(.129)
70+	-1.219 **	0.017	-0.929 **	-0.978 **	-0.747 **	-0.068	-0.794 **	0.163
	(.035)	(.137)	(.037)	(.246)	(.029)	(.269)	(.052)	(.137)
Years Low-Income (92-95)								
One	2.258 **	2.600 **	2.638 **	2.156 **	2.314 **	2.297 **	2.650 **	1.650 **
	(.026)	(.024)	(.026)	(.089)	(.025)	(.021)	(.032)	(.031)
Two	2.979 **	3.403 **	3.393 **	2.920 **	3.188 **	2.995 **	3.365 **	2.379 **
	(.028)	(.025)	(.028)	(.100)	(.026)	(.022)	(.036)	(.035)
Three	3.672 **	4.170 **	3.833 **	3.526 **	4.006 **	3.670 **	3.955 **	3.135 **
	(.029)	(.027)	(.029)	(.110)	(.028)	(.024)	(.039)	(.039)
Four	5.348 **	5.337 **	5.313 **	4.944 **	5.759 **	4.847 **	5.028 **	4.434 **
	(.032)	(.029)	(.032)	(.124)	(.029)	(.025)	(.040)	(.040)

(continued)

Table A9b: **(cont.)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	0.528 **	0.665 **	0.712 **	0.597 *	0.680 **	0.428 **	0.640 **	0.047
	(.069)	(.049)	(.054)	(.238)	(.068)	(.045)	(.069)	(.095)
PEI	0.095	-0.104	0.287 *	-0.330	0.232	-0.160	-0.065	-0.362 *
	(.132)	(.122)	(.131)	(.468)	(.127)	(.107)	(.183)	(.165)
NS	0.279 **	0.330 **	0.436 **	0.284	0.415 **	0.098 *	0.292 **	0.097
	(.052)	(.049)	(.049)	(.185)	(.050)	(.043)	(.066)	(.069)
NB	0.208 **	0.226 **	0.350 **	0.305	0.466 **	0.031	0.169 *	-0.020
	(.061)	(.055)	(.056)	(.204)	(.057)	(.049)	(.077)	(.082)
QUEB	0.150 **	-0.011	0.183 **	-0.177	0.353 **	-0.196 **	0.030	-0.099 **
	(.025)	(.024)	(.026)	(.092)	(.023)	(.021)	(.034)	(.032)
MAN	0.083	0.012	0.042	0.065	0.157 **	-0.059	-0.042	-0.344 **
	(.049)	(.042)	(.051)	(.173)	(.047)	(.038)	(.065)	(.065)
SASK	0.020	-0.029	0.111 *	-0.149	-0.101	-0.060	0.166 **	-0.386 **
	(.055)	(.045)	(.050)	(.183)	(.052)	(.040)	(.064)	(.071)
ALTA	-0.117 **	-0.004	0.021	-0.482 **	-0.282 **	-0.084 **	0.153 **	-0.315 **
	(.038)	(.031)	(.037)	(.132)	(.038)	(.027)	(.043)	(.045)
BC	0.001	-0.079 **	0.221 **	-0.040	0.154 **	-0.139 **	0.243 **	-0.531 **
	(.032)	(.030)	(.031)	(.115)	(.030)	(.026)	(.037)	(.038)
Area Size (500,000+)								
100,000-499,999	0.000	-0.090 **	-0.198 **	-0.159	0.054	-0.165 **	-0.172 **	0.084 *
	(.031)	(.030)	(.033)	(.111)	(.028)	(.025)	(.041)	(.036)
30,000-99,999	-0.016	-0.039	-0.031	0.002	0.113 **	-0.162 **	-0.096 *	0.133 **
	(.033)	(.031)	(.032)	(.109)	(.030)	(.027)	(.043)	(.038)
15,000-29,999	0.007	0.004	-0.016	-0.204	0.100	-0.109 *	-0.064	0.205 **
	(.061)	(.057)	(.060)	(.200)	(.060)	(.049)	(.080)	(.073)
0-14,999	-0.022	0.087 **	0.119 **	-0.061	0.172 **	-0.013	0.127 **	0.222 **
	(.030)	(.027)	(.028)	(.106)	(.029)	(.023)	(.037)	(.039)
Rural Area	0.099 **	0.358 **	0.307 **	0.126	0.245 **	0.250 **	0.363 **	0.401 **
	(.031)	(.026)	(.028)	(.109)	(.033)	(.023)	(.037)	(.046)
Log Likl.	76,681	97,927	85,728	5,750	89,375	124,774	54,755	46,688
Sample Size	131,280	254,780	275,840	7,800	182,650	260,330	205,390	56,010

* Significance at the 95% level

** Significance at the 95% level

— The coefficient had to be suppressed to alleviate convergence problems.

Table A9c: **Probability Effects for 1995-1996 Entry (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	4.11 **	1.76 **	1.36 **	8.00 **	3.55 **	2.34 **	1.36 **	9.12 **
Family Dynamics								
to Single	N/A	3.46 **	1.14 **	-4.04 **	N/A	10.43 **	6.59 **	-3.39 **
to Attached with Children	-0.46	N/A	1.16 **	-1.40	-0.76	N/A	1.67 **	-6.09 **
to Attached no Children	-1.97 **	-0.42 **	N/A	-4.59	-1.46 **	-0.45 **	N/A	-6.00 **
to Lone Parent	5.62 **	2.53 **	2.48 *	N/A	15.74 **	28.90 **	26.55 **	N/A
to Filing Child	-2.96 **	-0.15	-0.26	—	-2.27 **	—	-0.85	—
New Spouse	N/A	4.25 **	1.56 **	N/A	N/A	12.10 **	3.80 **	N/A
Number of Children (One)								
Two	N/A	-0.17 **	N/A	-0.31	N/A	0.04	N/A	-0.78 *
Three	N/A	0.07	N/A	0.53	N/A	0.30 **	N/A	2.29 **
Four	N/A	0.18	N/A	-3.05	N/A	0.70 **	N/A	7.67 **
Five or more	N/A	0.59 **	N/A	3.07	N/A	1.19 **	N/A	8.43 **
Minority Language (ENG/FR)								
English-Quebec	0.25	0.44 **	0.01	3.24	0.25	0.91 **	-0.05	2.19
French-ROC	-0.73	-0.12	0.38 *	0.23	-0.35	-0.14	0.24	-2.94
Age Group (40-49)								
20-29	-0.46 *	0.77 **	-0.41 **	0.48	-1.01 **	1.19 **	-0.51 **	6.44 **
30-39	-0.14	0.41 **	-0.16 *	2.02 *	-1.03 **	0.58 **	-0.21 **	2.46 **
50-59	0.87 **	0.26 **	0.38 **	-0.66	0.63 **	0.29 *	0.20 **	1.02
60-69	-1.49 **	0.78 **	0.06	5.93 *	-1.59 **	-0.14	-0.59 **	7.16 **
70+	-2.33 **	0.22	-0.79 **	-3.61	-1.68 **	-0.42	-0.98 **	3.41
Years Low-Income (92-94)								
One	12.88 **	8.71 **	7.57 **	18.84 **	12.37 **	7.84 **	7.05 **	15.05 **
Two	20.23 **	15.76 **	12.42 **	28.70 **	22.42 **	13.49 **	12.62 **	25.42 **
Three	31.88 **	25.58 **	18.23 **	39.48 **	34.99 **	21.28 **	19.19 **	37.71 **

(continued)

Table A9c: (cont.)

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Province (Ont.)								
NFLD	1.45 **	0.95 **	1.06 **	0.46	0.90 *	0.57 **	0.80 **	-2.85 *
PEI	0.45	-0.13	0.49	-3.86	0.00	0.01	-0.36	-5.44 **
NS	0.91 **	0.40 **	0.75 **	4.45	0.04	0.18	0.38 **	-3.72 **
NB	0.64	0.29 *	0.58 **	-0.46	0.76 *	0.04	0.35 *	-4.94 **
QUEB	-0.08	-0.09	0.39 **	-2.60 **	0.60 **	-0.47 **	0.31 **	-4.60 **
MAN	0.15	-0.12	0.06	-2.94	0.36	-0.27 *	0.13	-4.71 **
SASK	0.05	0.13	0.28 **	-2.10	0.31	-0.23 *	0.47 **	-5.53 **
ALTA	-0.41	-0.04	0.17 *	-2.11	-0.54 **	-0.06	0.29 **	-3.83 **
BC	0.03	0.03	0.35 **	-0.63	0.29	-0.09	0.45 **	-4.18 **
Mover	3.05 **	1.63 **	0.72 **	4.74	4.59 **	3.66 **	1.34 **	13.06 **
Area Size (500,000+)								
100,000-499,999	-0.09	-0.19 **	-0.26 **	-1.75	0.12	-0.21 **	-0.17 *	0.23
30,000-99,999	0.24	-0.06	-0.01	-0.56	0.26	-0.06	-0.03	1.28 *
15,000-29,999	-0.27	-0.24	0.09	0.49	0.13	-0.16	0.01	2.60 *
0-14,999	0.35	0.24 **	0.40 **	-1.10	0.65 **	0.20 **	0.39 **	1.98 **
Rural Area	1.09 **	0.93 **	0.80 **	1.49	1.27 **	1.04 **	1.06 **	4.22 **

* Significance at the 95% level

** Significance at the 95% level

— The coefficient had to be suppressed to alleviate convergence problems.

Table A9d: **Probability Effects for Being Poor, 1996 (%)**

	Men				Women			
	Single	Attached with Children	Attached no Children	Lone Parent	Single	Attached with Children	Attached no Children	Lone Parent
Base Line Probability	5.30 **	1.82 **	1.51 **	7.97 **	3.81 **	2.95 **	1.45 **	10.65 **
Number of Children (One)								
Two	N/A	-0.06 *	N/A	-1.12 *	N/A	-0.18 **	N/A	1.00 **
Three	N/A	0.03	N/A	-1.87 *	N/A	-0.01	N/A	4.33 **
Four	N/A	0.19 **	N/A	-2.26	N/A	0.36 **	N/A	8.95 **
Five or more	N/A	0.58 **	N/A	1.40	N/A	1.01 **	N/A	15.09 **
Minority Language (ENG/FR)								
English-Quebec	0.37	0.55 **	0.04	2.60	0.05	0.53 **	0.38 **	-0.81
French-ROC	0.73	-0.06	0.12	0.76	-0.01	-0.33	0.22	-0.11
Age Group (40-49)								
20-29	-0.71 **	0.68 **	-0.30 **	4.86 **	0.18	0.29 **	-0.62 **	12.93 **
30-39	-0.39 **	0.37 **	-0.12	3.22 **	-0.38 **	0.37 **	-0.17 **	5.45 **
50-59	0.96 **	0.11 *	0.43 **	-0.23	0.80 **	0.25 *	0.35 **	0.02
60-69	-2.64 **	0.22	0.09	-0.43	-1.98 **	0.07	-0.37 **	1.91
70+	-3.67 **	0.03	-0.91 **	-4.81 **	-1.97 **	-0.19	-0.79 **	1.86
Years Low-Income (92-95)								
One	29.58 **	18.16 **	16.16 **	34.81 **	24.81 **	20.28 **	15.80 **	27.64 **
Two	47.09 **	33.97 **	29.84 **	53.64 **	45.20 **	34.87 **	28.43 **	45.61 **
Three	63.46 **	52.73 **	30.97 **	66.66 **	64.71 **	51.48 **	42.01 **	62.60 **
Four	86.86 **	77.59 **	74.19 **	84.43 **	88.82 **	76.54 **	67.77 **	80.29 **
Province (Ont.)								
NFLD	3.37 **	1.66 **	1.52 **	5.62 *	3.44 **	1.51 **	1.27 **	0.45
PEI	0.49	-0.16	0.49 *	-2.11	0.95	-0.42	-0.09	-2.90 *
NS	1.59 **	0.69 **	0.81 **	2.34	1.65 **	0.29 *	0.48 **	0.96
NB	1.14 **	0.45 **	0.62 **	2.54	2.13 **	0.09	0.26 *	-0.19
QUEB	0.61 **	-0.02	0.30 **	-1.20	1.53 **	-0.52 **	0.04	-0.90 **
MAN	0.43	0.02	0.06	0.49	0.62 **	-0.16	-0.06	-2.86 **
SASK	0.10	-0.05	0.18 *	-1.02	-0.35	-0.17	0.26 **	-3.15 **
ALTA	-0.56 **	-0.01	0.03	-2.89 **	-0.91 **	-0.23 **	0.24 **	-2.64 **
BC	0.01	-0.14 **	0.37 **	-0.28	0.60 **	-0.37 **	0.39 **	-4.10 **
Area Size (500,000+)								
100,000-499,999	0.00	-0.15 **	-0.27 **	-1.09	0.20	-0.44 **	-0.23 **	0.82 *
30,000-99,999	-0.08	-0.07	-0.05	0.01	0.44 **	-0.43 **	-0.13 *	1.33 **
15,000-29,999	0.04	0.01	-0.02	-1.37	0.38	-0.30 *	-0.09	2.11 **
0-14,999	-0.11	0.16 **	0.19 **	-0.43	0.68 **	-0.04	0.19 **	2.30 **
Rural Area	0.52 **	0.76 **	0.53 **	0.97	1.01 **	0.81 **	0.62 **	4.45 **
Log Likl.								
Sample Size								

* Significance at the 95% level

** Significance at the 95% level

--- The coefficient had to be suppressed to alleviate convergence problems.

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